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REPORT AND RECOMMENDATIONS MADE BY THE PANEL OF COMMISSIONERS CONCERNING THE SECOND INSTALMENT OF "E1" CLAIMS

GE.99-62368

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List of abbreviations

Name	Defined
Arabian Oil Company Limited	"Arabian Oil"
The Arabian American Oil Company	"ARAMCO"
Authorization for Expenditure	"AFE"
Barrels per day	"BPD"
Cost and Commitment Accounts	"COCO"
Discounted Cash Flow	"DCF"
General Petroleum Marketing Organization of the Republic of Iraq	"GPMO"
General Petroleum and Minerals Organization of the Kingdom of Saudi Arabia	"Petromin"
Joint Operation Agreement	"JO"
Kuwait National Petroleum Corporation	"KNPC"
Kuwait Petroleum Corporation	"KPC"
Kuwait Oil Company	"KOC"
Kuwait Ministry of Electricity and Water	"MEW"
Kuwait Santa Fe for Engineering and Petroleum Projects Company	"Kuwait Santa Fe"
Partitioned Neutral Zone	"PNZ"
The Khafji and Hout fields in the offshore portion of the PNZ	"PNZ Off-Shore Fields"
Saudi Arabian Texaco	"SAT"
Saudi Arabian Oil Company	"Saudi Aramco"
State Oil Marketing Organisation of Iraq	"SOMO"
Well Blowout Control	"WBC"

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Introduction

1. The Governing Council of the United Nations Compensation Commission (the "Commission") appointed the present Panel of Commissioners (the "Panel"), composed of Messrs. Allan Philip (Chairman), Bola A. Ajibola and Antoine Antoun, at its sixteenth session, on 22 March 1995. The Panel was directed to review claims filed with the Commission on behalf of corporations and other legal entities involved in the oil and gas and related industries ("Category 'E1' claims"). This review was to be conducted in accordance with the relevant Security Council resolutions, Governing Council decisions, the Provisional Rules for Claims Procedure (S/AC.26/1992/10)(the "Rules")and relevant rules of international law. This report contains the recommendations to the Governing Council by the Panel, pursuant to article 38(e) of the Rules, concerning the second instalment of "E1" claims, which consists of five claims filed by corporations or other legal entities (the "Claimants") described below, each of which seeks compensation for loss, damage or injury allegedly arising out of Iraq's unlawful invasion and subsequent occupation of Kuwait on 2 August 1990.

2. The claims included in this report are listed in the following table. The claim amounts shown in this table are the total of all amounts claimed in all filings made with the claim.

Table 1. The second instalment of E1 claims

Claim	Claim number	Claim amount (US$)	Submitting country
Saudi Arabian Oil Company	4002627	4,845,552,637	Saudi Arabia
Arabian Oil Company	4000987	5,836,307,964	Japan
Kuwait Oil Company	4004160	2,512,896,177	Kuwait
Kuwait Petroleum Corporation	4003198	124,396,824	Kuwait
Saudi Arabian Texaco Inc	4000604	1,519,952,314	United States of America
Total		14,839,105,916	

I. PROCEDURAL HISTORY

A. The nature and purpose of the proceedings

3. The role and functions of panels of Commissioners operating within the framework of the Commission are set forth in the Secretary-General's

report to the Security Council dated 2 May 1991. In his report, the Secretary-General described the function of the Commission as follows:

> "... The Commission is not a court or an arbitral tribunal before which the parties appear; it is a political organ that performs an essentially fact-finding function of examining claims, verifying their validity, evaluating losses, assessing payments and resolving disputed claims. It is only in this last respect that a quasi-judicial function may be involved. Given the nature of the Commission, it is all the more important that some element of due process be built into the procedure. It will be the function of the commissioners to provide this element.
>
> "The processing of claims will entail the verification of claims and evaluation of losses and the resolution of any disputed claims. The major part of this task is not of a judicial nature; the resolution of disputed claims would, however, be quasi-judicial. It is envisaged that the processing of claims would be carried out principally by the commissioners. Before proceeding to the verification of claims and evaluation of losses, however, a determination will have to be made as to whether the losses for which claims are presented fall within the meaning of paragraph 16 of Security Council resolution 687 (1991), that is to say, whether the loss, damage or injury is direct and as a result of Iraq's unlawful invasion and occupation of Kuwait."

4. Panels were entrusted with three tasks. First, panels were required to determine whether the various types of losses alleged by claimants were within the jurisdiction of the Commission. Second, panels were required to verify whether the alleged losses that were in principle compensable had in fact been incurred by a given claimant. Third, panels were required to determine in what amounts these compensable losses were incurred.

5. The Panel uses the term "overstated" in this report to convey only that it disagrees with a claimant's stated claim amount and that, in its opinion, the claim amount as stated is larger than the amount supported by the evidence.

B. The procedural history of the claims

6. On 31 December 1997, the Panel issued its first procedural orders relating to the claims. In view of the complexity of the issues raised, the volume of the documentation underlying the claims and the amount of compensation sought by the claimants, the Panel classified each of the claims as "unusually large or complex" claims within the meaning of article 38(d) of the Rules.

7. In its review of the claims, the Panel has employed the full range of investigative procedures available to it under the Rules. For some claims, the Panel has also been assisted by the responses of the claimants to interrogatories and to requests for documents. Iraq has also filed replies to the claims, which include specific comments on and analyses of the claimed losses as well as legal argument on the compensability of particular loss types. In its replies, Iraq addressed most of the individual claim elements submitted by the claimants. Iraq generally provided argument and, in some instances, evidence to support its positions. The Panel notes that, in taking full advantage of the opportunity to participate in the resolution of these claims, Iraq has been helpful to the Panel in its work.

8. Because of the complex nature and subject matter of the claims, the Panel engaged consultants with expertise in asset valuation and forensic accounting, including estimation of business losses to assist in determining the appropriate valuation of those claim elements that were found to be compensable.

9. The initial work of the secretariat and the consultants yielded specific legal recommendations and questions and identified areas of the claims for which further factual development or evidence was required. To address this need, the Panel, assisted by the secretariat and the consultants, prepared questions and formal requests for additional evidence for the claimants. Such questions and requests (collectively referred to herein as "interrogatories") typically sought clarification of statements in the claim or additional documentation regarding the claimed losses. The Panel issued procedural orders dated 20 February 1998, in which the Panel invited the claimants to respond on specified dates to the interrogatories annexed to the procedural orders.

10. The Panel instructed the secretariat to transmit to Iraq the documents filed by the claimants in the claims and invited Iraq to submit by 30 June 1998 its replies to the claims, together with any documentation Iraq might wish to rely on in the present proceedings. Iraq was also requested to submit its comments on the interrogatories submitted to and responses received from the claimants.

11. In March of 1998, the claimants began to submit their responses to the interrogatories. Pursuant to the procedural order of 20 February 1998, the claimants' responses were transmitted to Iraq upon their receipt. Iraq submitted its replies to the statements of claim in June 1998.

12. After reviewing the claims, the claimants' responses to the interrogatories and the evidence submitted by the claimants, the Panel directed its consultants to analyse the claims, to report their opinions on the appropriate valuation of each of the compensable claim elements and to identify the evidence supporting those opinions. To perform this task, the

consultants spent several months reviewing the entire file on each of the referred claims, including the evidence and interrogatory responses, and consulting with the Panel and the secretariat.

13. In addition, the consultants reviewed the submissions by Iraq that focused on valuation issues.

14. In August 1998, the consultants began presentation of their opinions to the Panel in a series of written reports and appearances before the Panel. The Panel reviewed these reports and, over the course of several Panel meetings, discussed these with the consultants. Where appropriate, the Panel made further inquiries of the claimants or the consultants.

15. The Panel is satisfied that the consultants' reports were prepared to a high professional standard and are free from any bias in favour of either the claimants or Iraq.

16. In drafting this report, the Panel has not included specific citations to restricted or non-public documents that were produced or made available to it for the completion of its work. The Panel likewise does not recite in detail its valuation of each particular claim element while ensuring that this report clearly indicates those parts of the claims that were found to be outside the jurisdiction of the Commission. The amounts reported as recommended compensation for each claim element represent the value of that portion of the claim element that could be verified. The Panel's adjustments as reported herein are then calculated as the difference between the total claim amount for that claim element as stated by the claimant and the amount which could be verified by the Panel. Any arithmetic or typographic error in the claimant's stated claim amount is thus accounted for in the Panel's adjustment.

II. LEGAL FRAMEWORK

A. Applicable law and criteria

17. The law to be applied by the Panel is set out in article 31 of the Rules, which provides as follows:

> "In considering the claims, Commissioners will apply Security Council resolution 687 (1991) and other relevant Security Council resolutions, the criteria established by the Governing Council for particular categories of claims, and any pertinent decisions of the Governing Council. In addition, where necessary, Commissioners shall apply other relevant rules of international law."

B. Liability of Iraq

18. According to paragraph 16 of Security Council resolution 687 (1991),

"... Iraq, without prejudice to the debts and obligations of Iraq arising prior to 2 August 1990, which will be addressed through the normal mechanisms, is liable under international law for any direct loss, damage ... or injury to foreign Governments, nationals and corporations, as a result of Iraq's unlawful invasion and occupation of Kuwait". The Panel notes that, when making Security Council resolution 687 (1991), the Security Council acted under Chapter VII of the United Nations Charter, which permits it to exercise its powers under that Chapter to maintain and restore international peace and security. The Security Council also acted under Chapter VII and under article 29 of the United Nations Charter when making resolution 692 (1991), in which it decided to establish the Commission and the Compensation Fund referred to in paragraph 18 of Security Council resolution 687 (1991). Given these provisions, the issue of Iraq's liability for losses falling within the Commission's jurisdiction is resolved and is not subject to review by the Panel.

19. The Governing Council has given some further guidance on what constitutes "direct loss, damage or injury" for which Iraq is liable under Security Council resolution 687 (1991). Paragraph 21 of Governing Council decision 7 is the seminal rule on "directness" for category "E" claims, and it provides, in relevant part, that compensation is available:

> "... with respect to any direct loss, damage, or injury to corporations and other entities as a result of Iraq's unlawful invasion and occupation of Kuwait. This will include any loss suffered as a result of:
>
> (a) Military operations or threat of military action by either side during the period 2 August 1990 to 2 March 1991;
>
> (b) Departure of persons from or their inability to leave Iraq or Kuwait (or a decision not to return) during that period;
>
> (c) Actions by officials, employees or agents of the Government of Iraq or its controlled entities during that period in connection with the invasion or occupation;
>
> (d) The breakdown of civil order in Kuwait or Iraq during that period; or
>
> (e) Hostage-taking or other illegal detention."

20. The list of possible causes of "direct loss" in paragraph 21 is not exhaustive and leaves open the possibility that there may be causes other than those enumerated. Decision 15 of the Governing Council confirms this: "[t]here will be other situations where evidence can be produced showing claims are for direct loss, damage or injury as a result of Iraq's unlawful invasion and occupation of Kuwait". [4] Should that be the case, the claimants will have to show that a loss which was not suffered as a result of one of the five categories of events in paragraph 21 is nevertheless a "direct" one.

21. While the language "as a result of" contained in paragraph 21 is not defined further in decision 7, Governing Council decision 9 provides guidance as to what may be considered to constitute "losses suffered as a result of" Iraq's unlawful invasion and occupation of Kuwait. [5]

22. Thus, decisions 7 and 9 provide guidance to the Panel as to how the "direct loss" requirement must be interpreted. It is against this background that the Panel will examine the claims discussed in this report to determine whether, with respect to each, the requisite causal link - a "direct loss" - is present.

C. Jurisdiction

23. With respect to the clause in paragraph 16 of Security Council resolution 687 (1991) relating to the debts and obligations of Iraq "... arising prior to 2 August 1990 ...", the Panel refers to the Report and Recommendations Made By The Panel Of Commissioners Concerning The First Instalment of "E2" Claims (S/AC.26/1998/7)annexed to Governing Council decision 53 [S/AC.26/Dec.53 (1998)] wherein the "E2" Panel concluded that the "arising prior to" clause was intended to exclude from the jurisdiction of the Commission the foreign debt of Iraq that existed at the time of Iraq's 2 August 1990 invasion of Kuwait. Having studied the normal business practices in Iraq prior to that country's accumulation of a significant amount of foreign debt during the course of the Iran-Iraq War (1980-1988), the "E2" panel concluded that foreign contracting parties operating in Iraq at that time could generally expect to be paid within one to three months of the performance of its obligation.

24. The "E2" Panel therefore found that:

"In case of contracts with Iraq, where the performance giving rise to the original debt had been rendered by a claimant more than three months prior to 2 August 1990, that is, prior to 2 May 1990, claims based on payments owed, in kind or in cash, for such performance are outside of the jurisdiction of the Commission as claims for debts or obligations arising prior to 2 August 1990." (S/AC.26/1998/7, para. 90).

25. The "E2" Panel applied the above-referenced finding to specific factual situations including claims based on deferred payment arrangements where the Panel concluded that, regardless as to whether deferred payment arrangements may have created new debts and obligations on the part of Iraq under a particular legal system, they did not do so for the purposes of Security Council resolution 687 (1991). Accordingly, the "E2" Panel concluded that such claims based on deferred payment arrangements do not constitute new debts as of their date that are separate and distinct from the original contracts and are therefore outside the jurisdiction of the Commission.

26. The "E2" Panel also considered claims where the claimants shipped goods to Iraq pursuant to contracts entered into prior to 2 August 1990. In such cases, "performance" was taken to mean the delivery of goods pursuant to the terms of the contracts. Applying the "arising prior to" clause, the "E2" Panel found that:

> "[W]here claimants had completed performance (i.e., delivered the goods, as evidenced by appropriate documentation) more than three months prior to 2 August 1990, claims for the recovery of amounts owed by Iraq for that performance shall be considered to have arisen prior to 2 August 1990 and, as such, outside the jurisdiction of this Commission. In cases where deliveries of goods were made within three months prior to 2 August 1990, claims for compensation for amounts owed by Iraq for such performance meet the 'arising prior' to test". (S/AC.26/1998/7, paragraph 105).

27. The Panel has analysed the "E2" Panel's findings and adopts its conclusion for the purposes of the review of these claims. Accordingly, the Panel finds that the terms "debts or obligations arising prior to 2 August 1990" means a debt or an obligation that is based on work performed or services rendered prior to 2 May 1990.

28. The Panel wishes to point out in this connection that, although it is true that during the occupation of Kuwait, Iraq purported to repudiate certain debts, which may include the claims discussed within this report, it follows from paragraph 17 of Security Council resolution 687 (1991) and Iraq's acceptance thereof that such repudiation is without effect and that such debts still exist.

29. The Panel also emphasizes that in reviewing such claims before it, which are within its jurisdiction, the Panel will analyse the claims in the light of the particular, relevant facts and circumstances of each claim, in particular, with respect to the question whether, as required in paragraph 16 of Security Council resolution 687 (1991), there is a direct loss resulting from Iraq's unlawful invasion and occupation of Kuwait. The Panel will be particularly watchful for claims wherein the claimants may be

able to demonstrate a long standing practice, dating back prior to 1980, of granting Iraqi buyers and contract parties long or deferred payment terms.

D. Evidentiary requirements

30. Article 35(1) of the Rules provides general guidance on the submission of evidence by a claimant:

"Each claimant is responsible for submitting documents and other evidence which demonstrate satisfactorily that a particular claim or group of claims is eligible for compensation pursuant to Security Council resolution 687 (1991). Each panel will determine the admissibility, relevance, materiality and weight of any documents and other evidence submitted."

31. Pursuant to article 35(3) of the Rules, corporate claims must be supported by documentary and other appropriate evidence sufficient to demonstrate the circumstances and amount of the claimed loss. The Governing Council has made it clear that with respect to business losses there "will be a need for detailed factual descriptions of the circumstances of the claimed loss, damage or injury" in order for compensation to be awarded. [6]

32. All corporations filing category "E" claims were required to submit with their claim forms "a separate statement explaining its claim ('Statement of Claim'), supported by documentary and other appropriate evidence sufficient to demonstrate the circumstances and the amount of the claimed loss". [7] In addition, claimants were instructed to include in the Statement of Claim the following particulars:

"(a) The date, type and basis of the Commission's jurisdiction for each element of loss ...;

(b) The facts supporting the claim;

(c) The legal basis for each element of the claim;

(d) The amount of compensation sought, and an explanation of how this amount was arrived at." [8]

III. CLAIM OF SAUDI ARABIAN OIL COMPANY (CLAIM NO: 4002627)

A. Introduction

33. Pursuant to arrangements described below, the Kingdom of Saudi Arabia ("Saudi Arabia") entered into a crude oil exchange contract with an agency of the Government of the Republic of Iraq ("Iraq"). Under this contract, Saudi Arabia agreed to supply a specified average daily quantity of oil to Iraq for a period of approximately one year. In return, the Iraqi contracting agency agreed to supply Iraqi oil of equivalent value to Saudi Arabia during specified later periods. The parties later extended the exchange contract through four letter agreements, in each case agreeing that Saudi Arabia would continue to supply oil for a further year at a specified average daily quantity and extending the time for performance of the Iraqi agency's reciprocal obligation to supply oil. The exchange contract and these letter agreements are collectively referred to as the "Aramco Barter Agreement".

34. The Arabian American Oil Company ("Aramco") was directed to perform Saudi Arabia's delivery obligations under the Aramco Barter Agreement. Aramco was established under the laws of the State of Delaware, United States of America. Aramco operated an oil concession in Saudi Arabia prior to the acquisition of 100 per cent of its interests by Saudi Arabia in the 1970s.

35. With effect from 1 January 1989, Saudi Arabia transferred the assets and liabilities of Aramco to the Saudi Arabian Oil Company ("Saudi Aramco"). Saudi Aramco is a limited liability company established under the laws of Saudi Arabia on 13 November 1988. It is wholly owned by Saudi Arabia and its purpose is to engage in activities relating to all aspects of the oil industry and other related industries in Saudi Arabia and elsewhere.

B. Facts and contentions

36. Saudi Aramco files this claim on its own behalf, in its capacity as the successor in interest to Aramco, and on behalf of the General Petroleum and Minerals Organisation of the Kingdom of Saudi Arabia ("Petromin"), the governmental agency on whose behalf Aramco performed the Aramco Barter Agreement. Saudi Aramco alleges that Iraq has repudiated its debts under this agreement as a result of Iraq's unlawful invasion and occupation of Kuwait. Saudi Aramco further alleges that Iraq has never performed its return obligations under the Aramco Barter Agreement and requests compensation for the monetary value of the oil which it considers that Iraq should have delivered pursuant thereto ("Aramco Barter Claim"). Saudi Aramco seeks compensation in the amount of US$4,845,552,637.40 plus unquantified interest.

37. The claim amount includes (a) US$4,643,831,487.30, which is the value of the oil supplied through 31 December 1987 and (b) US$201,721,150.10, which is the asserted value of the oil supplied after that date. Saudi Aramco asserts that the Iraqi Ministry of Oil has confirmed the value of oil supplied prior to 1988 to Aramco's auditors in a letter and provides a copy of that letter.

38. By an exchange contract dated 7 December 1982 entered into between Petromin and the General Petroleum Marketing Organisation of the Republic of Iraq ("GPMO"), Petromin agreed to supply GPMO with an average of 184,000 barrels of Saudi Arabian oil per day for one year beginning 1 January 1983. In return, GPMO agreed to supply Petromin with Iraqi oil of equivalent value at a similar average daily quantity beginning approximately on 1 January 1984.

39. In 1987 the State Oil Marketing Organisation of Iraq ("SOMO") became the successor to GPMO under the Aramco Barter Agreement (GPMO and its successor are collectively referred to herein as "SOMO").

40. In a series of four letter agreements executed on 25 December 1983, 1 January 1985, 11 February 1986 and 24 November 1987, the parties amended the exchange contract. In each letter agreement, Petromin agreed to supply further oil to SOMO for periods of approximately one additional year, and SOMO agreed to repay the oil during a later period. The first letter agreement called for additional supplies at an average daily quantity of 184,000 Barrels Per Day ("BPD"), while the latter three called for an average daily quantity of 60,000 BPD. Each letter agreement also postponed the commencement of SOMO's obligations to return the oil.

41. Under the Aramco Barter Agreement, the parties calculated the value of the crude shipped by Petromin with reference to posted Saudi Arabian prices for crude of like grades.

42. Aramco made Petromin's deliveries on Petromin's behalf. Aramco recorded the value of the delivered crude in its books of account as a receivable from Petromin. Petromin's receivable from SOMO was later transferred to Saudi Aramco pursuant to a letter dated 21 March 1990. The amount has since been recorded in Saudi Aramco's accounts as a receivable from SOMO.

43. Petromin's obligations under the last letter agreement terminated on 31 December 1988, by which time it had completed performance of its obligations under the exchange contract and all of the letter agreements and had supplied SOMO with oil valued at US$4,845,552,637, the amount of this claim. Under the final letter agreement, SOMO was required to begin returning oil to Petromin on or around 1 January 1989. Saudi Aramco alleges that SOMO has never made any of the deliveries required by the Aramco Barter Contract.

44. Following the launch of Operation Desert Storm on 16 and 17 January 1991, the Iraqi Revolutionary Command issued a statement that it repudiated all liabilities to Saudi Arabia, because the latter had joined in that operation. Saudi Aramco claims that by this general repudiation, Iraq intended to repudiate its obligations under the Aramco Barter Agreement. As a result, Saudi Aramco claims that its receivable from SOMO will go unpaid.

C. Analysis and recommendations

45. The Panel's first task is to determine whether the Aramco Barter Claim is within the jurisdiction of the Commission. The Security Council in resolution 687 (1991) confers jurisdiction on the Commission over claims against Iraq for certain losses that are the direct result of Iraq's unlawful invasion and occupation of Kuwait. This jurisdiction is qualified, however, by the following phrase in paragraph 16 of that resolution:

> "without prejudice to the debts and obligations of Iraq arising prior to 2 August 1990, which will be addressed through the normal mechanisms".

46. Because the Aramco Barter Claim arose from a contractual obligation created prior to Iraq's unlawful invasion and occupation of Kuwait, the Panel must determine, as a threshold matter, (1) whether the claim is a debt or an obligation of Iraq and (2) whether it falls within the meaning of the "arising prior to 2 August 1990" limitation imposed by para. 16 of Security Council resolution 687 (1991).

47. The Security Council has not defined "debts and obligations" nor has it provided guidelines on when a debt arises.

48. The term "debts and obligations" has, however, been defined by the "E2" Panel, as "obligations to make future payments, in cash or in kind, in specified or determinable amounts and with fixed or determinable rates of interest (which may be zero)". [5] The Panel finds that this definition accurately conveys the meaning of the term.

49. The Panel also finds that the plain meaning of the term "debts and obligations" must include any reciprocal obligation assumed by the debtor as inducement for the receipt of something of value. Thus, an obligation under a barter arrangement, such as that presented here, constitutes a debt or obligation as those terms are used by the Security Council. Accordingly, the Panel finds that Iraq's obligations under the Aramco Barter Agreement are "debts and obligations" as those terms are used in Security Council resolution 687 (1991).

50. Next, the Panel must determine when this debt arose. As stated in section II.C., supra, the Panel finds that the Security Council's intention when inserting the "arising prior to" clause in Security Council resolution 687 (1991) was to exclude from the jurisdiction of the Commission certain debts and obligations existing prior to Iraq's invasion of Kuwait, even if those debts had been rescheduled. Such debts formed part of Iraq's foreign debt that had accumulated by the time of Iraq's unlawful invasion of Kuwait and were thus to be excluded from the jurisdiction of the Commission by Security Council resolution 687 (1991).

51. The Panel must therefore determine when Iraq's obligations under the Aramco Barter Agreement arose. SOMO's obligation to deliver oil under that Agreement arose not later than the date on which Aramco fulfilled Petromin's obligations under the Aramco Barter Agreement to deliver oil to SOMO. As demonstrated in paragraph 43, supra, the last of Petromin's supply obligations was fulfilled by Aramco at the latest by 31 December 1988. The Panel therefore finds that SOMO's obligations under the Aramco Barter Agreement is a debt or obligation of Iraq that arose prior to 2 August 1990 within the meaning of paragraph 16 of Security Council resolution 687 (1991). As a result, the Aramco Barter Claim is outside the jurisdiction of the Commission.

52. Accordingly, the Panel need not decide whether there exists a causal relationship between Iraq's unlawful invasion of Kuwait and its failure to fulfill its obligation under the Aramco Barter Agreement.

53. Because the Panel finds that the Commission lacks jurisdiction over the Aramco Barter Claim, it recommends that no compensation be awarded for this claim.

IV. CLAIM OF ARABIAN OIL COMPANY (CLAIM NO: 4000987)

A. Introduction

54. Pursuant to arrangements described below, the Arabian Oil Company Limited ("Arabian Oil") entered into a series of crude oil exchange contracts with an agency of the Government of the Republic of Iraq ("Iraq") in the 1980s. Under these contracts, Arabian Oil agreed to supply a specified average daily quantity of oil to Iraq for a period of approximately one year. In return, the Iraqi contracting agency agreed to supply Iraqi oil of equivalent value to Arabian Oil during specified later periods. The exchange contracts are collectively referred to as the "Arabian Oil Barter Agreement".

55. Arabian Oil alleges that it has completed all of its obligations under the Arabian Oil Barter Agreement but that Iraq has never performed its return obligations, and it requests compensation for the monetary value of the oil that it claims Iraq should have delivered pursuant thereto ("Arabian Oil Barter Claim"). Arabian Oil alleges that Iraq has repudiated its debts under this agreement as a result of Iraq's unlawful invasion and occupation of Kuwait.

B. Facts and contentions

56. Arabian Oil is a Japanese corporation involved in the exploration for, and production and distribution of, petroleum in the Persian Gulf area and elsewhere. The Governments of Kuwait and Saudi Arabia each own 10 per cent of Arabian Oil. Arabian Oil's largest customers, including large Japanese utilities, also own significant percentages of Arabian Oil's shares.

57. In 1922, a Neutral Zone was established between Saudi Arabia and the State of Kuwait ("Kuwait") in a 2000 square mile area between the two States. Subsequently, a treaty established that both States held an undivided interest in the mineral resources in the Neutral Zone and equal rights in the administration of those resources. Both States thereafter granted concessions to foreign companies to operate in the Neutral Zone. On July 1965, a Partition Treaty between the two States divided the Neutral Zone into two partitioned areas each subjected to the sovereignty of one State. The Neutral Zone then became known as the Partitioned Neutral Zone ("PNZ"). Although the treaty divided the areas in which each State had an interest, it did not alter the sub-surface rights of the party States which continued to be owned in undivided 50 per cent shares.

58. In particular, Saudi Arabia and Kuwait each owned an undivided 50 per cent interest in the Khafji and Hout fields in the offshore portion of the PNZ ("PNZ Off-Shore Fields"). They granted Arabian Oil an undivided 40 per

cent interest in petroleum produced from these fields. The working interests in the PNZ Off-Shore Fields are thus owned 30 per cent by Kuwait, 30 per cent by Saudi Arabia, and 40 per cent by Arabian Oil. Arabian Oil is the operator of the PNZ Off-Shore Fields under a joint operating agreement entered into with Saudi Arabia and Kuwait. Acting on behalf of the joint interests, Arabian Oil undertakes the extraction, processing, and marketing of the petroleum produced from the PNZ Off-Shore Fields.

59. In an exchange contract dated 20 June 1983 entered into between Arabian Oil, acting on behalf of the joint interests in the PNZ Off-Shore Fields, and SOMO, Arabian Oil agreed to supply SOMO with an average of 248,000 barrels of oil per day for one year beginning 1 February 1983. In return, SOMO agreed to supply Arabian Oil with Iraqi oil of equivalent value at a similar average daily quantity over a two year period beginning approximately on 1 January 1985.

60. In a series of four further exchange contracts executed on 12 April 1984, 14 February 1985, 29 August 1986 and 3 February 1988, each of which reference the original 20 June 1983 contract for certain terms and conditions, the parties agreed to additional exchanges. In each of these further contracts, Arabian Oil agreed to supply an additional 248,000 BPD of oil to SOMO for a period of approximately one additional year, and SOMO agreed to repay the oil at a later date by supplying Iraqi oil of equivalent value at a similar average daily quantity, typically over a period of two years.

61. All of the written agreements making up the Arabian Oil Barter Agreement had substantially the same terms on the valuation of oil as the 20 June 1983 exchange contract. Under the Arabian Oil Barter Agreement, the parties calculated the value of the oil shipped by Arabian Oil with reference to "the relevant Government Selling Price" for crude oil of like grades.

62. Arabian Oil's obligations under the Arabian Oil Barter Agreement terminated on 31 December 1988, by which time it had completed performance of its obligations under all of the agreements and had supplied SOMO with oil valued at US$5,836,307,964, the amount of this claim. Arabian Oil asserts that SOMO has acknowledged this debt in a written communication to Arabian Oil and provides a copy of that communication.

63. Under the 20 June 1983 exchange agreement, SOMO was required to begin returning oil to Arabian Oil on or around 1 January 1985. Arabian Oil alleges that SOMO has never made any of the deliveries required by the Arabian Oil Barter Contract. It appears that SOMO's obligation to make its reciprocal supplies was extended or delayed, but the claimant failed to provide the relevant documents.

64. Arabian Oil files this claim on its own behalf and on behalf of the joint interest holders, Kuwait and Saudi Arabia, on whose behalf Arabian Oil executed and performed the Arabian Oil Barter Agreement. Evidence of the consent of Kuwait and Saudi Arabia to this arrangement was submitted with the claim.

C. Analysis and recommendations

65. The Panel's first task is to determine whether the Arabian Oil Barter Claim is within the jurisdiction of the Commission. The Security Council, in resolution 687 (1991), confers jurisdiction on the Commission over claims against Iraq for certain losses that are the direct result of Iraq's unlawful invasion and occupation of Kuwait. This jurisdiction is qualified, however, by the following phrase in paragraph 16 of that resolution:

> "without prejudice to the debts and obligations of Iraq arising prior to 2 August 1990, which will be addressed through the normal mechanisms."

66. Because the Arabian Oil Barter Claim arose from a contractual obligation created prior to Iraq's unlawful invasion and occupation of Kuwait, the Panel must determine, as a threshold matter, (1) whether the claim is a debt or obligation of Iraq and (2) whether it falls within the meaning of the "arising prior to 2 August 1990" limitation imposed by article 16 of Security Council resolution 687 (1991).

67. The Security Council has not defined "debts and obligations" nor has it provided guidelines on when a debt arises.

68. The term "debts and obligations" has, however, been defined by the "E2 Panel", as "obligations to make future payments, in cash or in kind, in specified or determinable amounts and with fixed or determinable rates of interest (which may be zero)". [9] The Panel finds that this definition accurately conveys the meaning of the term.

69. The Panel also finds that the plain meaning of the term "debts and obligations" must include any reciprocal obligation assumed by the debtor as inducement for the receipt of something of value. Thus, an obligation under a barter arrangement, such as that presented here, constitutes a debt or obligation as those terms are used by the Security Council. Accordingly, the Panel finds that Iraq's obligations under the Arabian Oil Barter Agreement are "debts and obligations" as those terms are used in Security Council resolution 687 (1991).

70. Next, the Panel must determine when this debt arose. As stated in section II.C., supra, the Panel finds that the Security Council's intention

when inserting the "arising prior to" clause in Security Council resolution 687 (1991) was to exclude from the jurisdiction of the Commission certain debts and obligations existing prior to Iraq's invasion of Kuwait, even if those debts had been rescheduled. Such debts formed part of Iraq's foreign debt that had accumulated by the time of Iraq's unlawful invasion of Kuwait and was thus to be excluded from the jurisdiction of the Commission by Security Council resolution 687 (1991).

71. The Panel must therefore determine when SOMO's obligations under the Arabian Oil Barter Agreement arose. SOMO's obligation to deliver oil under that Agreement arose not later than the date on which Arabian Oil fulfilled its obligations under the Arabian Oil Barter Agreement to deliver oil to SOMO. As demonstrated in paragraph 62, supra, the last of Arabian Oil's supply obligations was fulfilled at the latest by 31 December 1988. The Panel therefore finds that SOMO's obligation under the Arabian Oil Barter Agreement is a debt or obligation of Iraq that arose prior to 2 August 1990 within the meaning of paragraph 16 of Security Council resolution 687 (1991). As a result, the Arabian Oil Barter Claim is outside the jurisdiction of the Commission.

72. Accordingly, the Panel need not decide whether there exists a causal relationship between Iraq's unlawful invasion and its failure to fulfill its obligation under the Arabian Oil Barter Agreement.

73. Because the Panel finds that the Commission lacks jurisdiction over the Arabian Oil Barter Claim, it recommends that no compensation be awarded for this claim.

V. CLAIM OF KUWAIT OIL COMPANY (CLAIM NO: 4004160)

A. The structure of Kuwaiti oil industry

74. All of the oil and gas resources in Kuwait, with the exception of those in the PNZ, are owned by Kuwait. [1] In Kuwait, the main onshore areas of oil and gas operations are the South East oil fields, the West oil fields and the North oil fields. The Burgan area in the South East oil fields is the most important of Kuwait's eight producing onshore fields and one of the largest in the world.

75. In the PNZ, Kuwait is involved in oil and gas operations both onshore and offshore. Kuwait operates onshore in an area known as Wafra, which includes the Wafra, South Umm Gudair and South Fuwaris oil fields. As discussed in paragraphs 57-58, supra , in 1958, Kuwait granted a concession to Arabian Oil to explore and produce oil from the continental shelf offshore of the PNZ. Kuwait and Arabian Oil participate in 60 and 40 per cent shares, respectively, of Kuwait's undivided 50 per cent interest in the PNZ Offshore Fields. In addition, Kuwait Petroleum Company ("KPC") owns a 10 per cent share holding in Arabian Oil.

76. In 1975, Kuwait Oil Company ("KOC"), a company wholly owned by Kuwait, was incorporated to take over all operations relating to oil and gas in Kuwait from Kuwait Oil Company Limited, a company incorporated in the United Kingdom. In 1978, Kuwait granted KOC power to carry out the exploration and production of oil and gas in the PNZ. KOC conducts joint operations ("JO") in the PNZ with Saudi Arabian Texaco ("SAT"), the company that holds Saudi Arabia's concession to operate in the PNZ.

77. In 1980, Kuwait reorganized its petroleum industry and established KPC to bring all operations relating to oil and gas under one corporate umbrella. KPC became the holding company for a number of State-owned companies, each with a specific area of responsibility. KPC's wholly owned subsidiaries include:

(a) Kuwait Oil Company, which explores for and produces petroleum;

(b) Kuwait National Petroleum Company, which refines crude oil and processes its associated gases;

(c) Petrochemical Industries Company, which produces and markets fertilizers and petrochemicals;

(d) Kuwait Oil Tanker, which is responsible for the transport of crude oil, petroleum products and liquefied gas;

(e) Kuwait Petroleum International, which operates downstream acquisitions in Europe and Asia from its London headquarters; and

(f) Kuwait Foreign Petroleum Exploration Company, which is responsible for overseas oil and gas exploration and development.

78. There are two other companies related to KPC. They are Kuwait Santa Fe for Engineering and Petroleum Projects Company ("Kuwait Santa Fe") and Kuwait Drilling Company. KPC indirectly controls Kuwait Santa Fe through its ownership of Santa Fe International Corporation, which is the parent corporation of Kuwait Santa Fe. KPC also owns an indirect minority interest in Kuwait Drilling Company.

79. In the aftermath of Iraq's unlawful invasion and occupation of Kuwait, many of these companies filed claims with the Commission. The following table summarizes the category "E1" claims filed by Kuwait oil sector companies.

Table 2. Claims of Kuwait oil sector companies

UNCC claim number	Name of claimant	Amount claimed (US$)
1798909†	Kuwait Oil Company	951,631,000.00
4004160*	Kuwait Oil Company	2,512,896,177.00
4003198*	Kuwait Petroleum Corporation	124,396,824.00
4004439	Kuwait Petroleum Corporation	6,640,516,049.00
4003197	Kuwait Petroleum Corporation	14,973,000,000.00
4004232	Kuwait Petroleum Corporation	24,221,881.00
4003070	Kuwait National Petroleum Company	2,347,618,003.46
4003069	Petrochemical Industries Company	284,037,145.33
4003068	Kuwait Oil Tanker Company	34,116,280.28
4003086	Kuwait Foreign Petroleum Exploration Company	14,899,000.00
4004159	Kuwait Santa Fe for Engineering and Petroleum Projects Company	90,609.00
4003178	Kuwait Drilling Company	108,486,245.67

† This claim, known as the "Well Blowout Control Claim" has previously been reviewed by this Panel (S/AC.26/1996/5 Annex)
* The physical assets claims of KOC and KPC, which are indicated above by asterisks, are the subject of this report.

B. Nature of claim

1. Facts and contentions

80. On 2 August 1990, KOC was the sole entity in Kuwait with the right and responsibility to explore for and produce petroleum and petroleum products, as well as to maintain and develop Kuwait's oil fields.

81. KOC claims that during Iraq's occupation of Kuwait, Iraqi forces took control of KOC's facilities, oil fields and offices. Kuwait asserts that it experienced extensive losses during the occupation as a result of the actions of Iraqi forces. The most serious of these claims is that Iraqi forces attached explosives to and detonated many of KOC's oil wells. KOC alleges that its assets were seriously damaged by the explosions, which destroyed oil wells and related equipment, thereby releasing crude oil onto the surface, causing fires and oil spills. KOC asserts further that missiles and gunfire also damaged its assets, while exposure to fires and oil spills further exacerbated the damage. KOC also claims that extensive looting and vandalism occurred during Iraq's unlawful invasion and occupation of Kuwait. KOC's production was allegedly reduced virtually to nothing during the occupation. Immediately after its liberation, Kuwait alleges that it was forced to import oil for the first time to meet its domestic energy needs.

82. The Panel reviewed and recommended compensation for the claim relating to the cost of extinguishing the oil fires and controlling the well blowouts in the report on the Well Blowout Control Claim ("WBC claim"). [12] To the extent that factual and legal findings made in the earlier report have a bearing on claims addressed in this report, the Panel expressly refers to and adopts such findings in the context of the present claims.

83. KOC requests compensation in the amount of US$2,512,896,177 for the destruction of the physical assets employed in the exploration, production, gathering and transportation of oil and gas and in the operation and maintenance of its oil industry infrastructure. In this amount, KOC also requests compensation for the increased costs of completing projects that were delayed or interrupted by Iraq's unlawful invasion and occupation of Kuwait.

2. Claim presented

84. The elements comprising KOC's claim (the "Claim") are itemized in the following table. Details of the claim elements are presented in the sections that follow:

Table 3. Claim of Kuwait Oil Company:
UNCC Claim No: 4004160 ("Physical Assets Claim")

Claim element	Claim amount (US$)
1. Oil fields:	
(a) South East oil fields	829,245,481
(b) West oil fields	190,643,380
(c) North oil fields	359,789,088
(d) Wafra oil fields	52,854,617
2. Ahmadi Township	23,574,096
3. North and South tank farms	148,029,763
4. Marine facilities	97,295,889
5. Ras Al Zoor - Gas facility	77,634,000
6. Projects under construction/consideration	66,652,479
7. Well blowout control - Al Awda & Other physical assets	407,548,924
8. Post well capping - Al Tameer	202,161,869
9. Phase III	54,904,490
10. Reconstruction of the Magwa Road/	932,070
Replacement of crude line no.5	1,630,031
Total	2,512,896,177

(a) Evidence presented in support

85. KOC's primary evidence of the destruction of its physical assets is contained in its internal damage assessment reports. Damage assessment reports were compiled by KOC's personnel in August 1991 to identify the status of each asset, its presence or disappearance and condition by referring to a computer printout of KOC's assets. This field work was carried out for several months resulting in the production of comprehensive damage assessment reports comprising written and photographic record of the damages to KOC's assets. In support of its assertions that Iraqi forces were responsible for this destruction, KOC submitted numerous affidavits and transcripts of oral witness statements.

86. Further support is offered by KOC's consultants' reports which contain a description of KOC's facilities, assessments and quantification of losses incurred by KOC. KOC based its claim amounts on both actual costs incurred to the date of the claim and estimated costs for repair and

reinstatement of physical assets that had not been completed at the time of the claim. KOC's consultants' quantification of losses is therefore based on two cost elements: costs incurred and paid by KOC as of 31 March 1994 to restore KOC's facilities and future costs that KOC estimates it will incur after 31 March 1994 to complete the restoration of its facilities. KOC's consultant's reports are mainly based on site surveys, KOC's internal records and two sets of accounts. During the reconstruction period, one of KOC's project managers, Bechtel, maintained a set of accounts called Cost and Commitment Accounts ("COCO accounts") and KOC kept a set of accounts called job cost summaries.

87. The evidence of expenses incurred by KOC to reinstate its facilities is provided in its consultant's reports which include breakdowns of expenditure in table form and copies of significant contracts and/or invoices for the reinstatement of facilities. KOC states that the incurred expenses or costs are based on the COCO accounts and KOC's job cost summaries. KOC's consultant's reports also contain appendices such as plans, site inventories, photographs and an index to KOC's damage assessment reports. Other evidence submitted includes contemporaneous documents such as representative samples of substantial contracts and invoices, plans of facilities and schematic diagrams in support of its claim. KOC also provided a video record of the effects of the oil well fires.

88. Iraq alleges that a large portion of KOC's original claim amount (approximately US$589,000,000 out of US$1,916,000,000) is based on estimates of the cost of outstanding works and asserts that the claim must be revised to reflect actual costs.

89. The Panel finds that it is reasonable for KOC to have presented estimated costs for those assets that were not repaired or reinstated as of the date of the claim because of the time limits imposed on the claimants for filing claims. It is clear that KOC could not rely on actual costs to calculate the amount of its claimed loss, as its efforts to remedy such loss could not reasonably have been completed before the deadline for filing its claim with the Commission.

90. The Panel is mindful of the need for accuracy in assessing the amount of compensable losses. To require the claimant to replace completely the original claim with one based solely on actual costs would cause unnecessary expense to the claimant and unacceptable delay to the Panel. Therefore, to address this issue, the Panel directed its consultants to compare the actual costs for repair and restoration work completed after the claim was filed with the estimated costs contained in the claim. The Panel's consultants reviewed voluminous information regarding the costs incurred and compared this information with the estimated costs contained in the claim. Based on this review, the Panel's consultants concluded that

the estimation procedure used was sufficiently accurate and that the variance between actual and estimated costs was negligible. The Panel is therefore satisfied that the calculation of KOC's claim has been prepared using acceptable methods.

(b) Iraq's response

91. Iraq generally disputes the compensability and certain valuation aspects of KOC's claims for reasons that can be summarized as set forth below.

(a) KOC's claim should be re-submitted to the Commission under category "F" as a Government claim to avoid duplication of claims.

(b) There is no independent auditors' or accountants' report on the financial aspects of the claim.

(c) There is no explanation of the difference between the loss figure in KOC's financial statement for the year ended 1997 and the claim figure submitted.

(d) Many assumptions and methods used in KOC's calculations are aimed to inflate the claim and therefore constitute a departure from the direct loss requirement. Further, certain bases, assumptions and methods are identified as incorrect. Specifically, in some instances, depreciation is not applied, residual life of assets employed is too high and betterment is not taken into account.

(e) KOC's claim is exaggerated as shown by the net book value of its fixed assets on its balance sheet as at 30 June 1990.

92. In addition to the general responses in the above, Iraq contests certain individual claims on specific grounds, which will be mentioned throughout the analysis of the claim.

93. The Panel has reviewed Iraq's general and specific replies to KOC's Physical Assets claim, some of which are more fully addressed in the context of the discussion below. Nevertheless, the Panel takes this opportunity to summarize its findings on the general objections to this claim expressed by Iraq.

3. The Panel's general findings

94. In its report on the WBC claim, the Panel found that claims by Kuwaiti oil sector companies could be filed as category "E" (corporate) claims rather than category "F" (government) claims because "public sector enterprises" such as KOC were intended to file category "E" claims pursuant

to paragraph 16 of Governing Council decision 7 (see paragraph 51 of the Panel's report on the WBC claim).

95. Article 35(1) of the Provisional Rules For Claims Procedure provides a general guidance on the submission of evidence by a claimant:

> "Each claimant is responsible for submitting documents and other evidence which demonstrate satisfactorily that a particular claim or group of claims is eligible for compensation pursuant to Security Council resolution 687 (1991). Each panel will determine the admissibility, relevance, materiality and weight of any documents and other evidence submitted."

96. Article 35(3) states the standard of evidence required for corporate, government and international organization claims:

> "With respect to claims received under the Criteria for Processing Claims of Individuals not Otherwise Covered, Claims of Corporations and Other Entities, and Claims of Governments and International Organizations (S/AC.26/1991/7/Rev.1), such claims must be supported by documentary and other appropriate evidence sufficient to demonstrate the circumstances and amount of the claimed loss."

97. The Panel finds that Article 35(3) sets the evidentiary standard that a claimant must meet. Accordingly, the Panel will address specific issues of evidence for each claim element in the claim analysis section. As noted in paragraph 31, supra, a claimant must support its claim "by documentary and other appropriate evidence sufficient to demonstrate the circumstances and amount of the claimed loss". Article 35(3) does not impose any formal requirements on the type of evidence presented by claimants, but rather directs the Panel to consider whether such evidence is probative.

98. Therefore KOC is not required to produce independent reports in order to recover the amounts claimed, nor is it bound by loss figures used in corporate reports for previous years, provided that other evidence produced establishes the circumstances and amount of the claimed loss.

99. Notwithstanding the foregoing, to the extent that evidence presented by KOC may be, for example, contradicted by contemporaneous corporate records, or does not reflect accepted business practices in the oil sector, the Panel examined the evidence presented with heightened scrutiny in order to determine whether the claimant satisfied its evidentiary obligations under Article 35(3).

C. Analysis of the claim

100. KOC first filed its claim in 1994. At that time, the work required to repair and reinstate its facilities was only partially completed. In order to meet the original claims deadline, therefore, KOC was required to estimate certain costs. Thus, as noted above, the KOC claim elements consist of both the actual costs of repair and reinstatement incurred prior to the preparation of the claim and the estimated future costs to complete this work.

101. From these costs, KOC proposes deductions, which it calls "adjustments", to account for depreciation, betterment and other benefits it received from reinstatement of its facilities.

102. Each section of this report on KOC's claim contains a table detailing the claimant's alleged actual and estimated future costs and its proposed adjustments, if any. At the end of its analysis of each section, the Panel includes a table showing additions or deductions made by the Panel to the amounts proposed by the claimant.

1. Oil fields

103. The assets employed in KOC's oil fields include oil wells, flowlines, gathering centres, booster stations and pipelines.

104. KOC claims that prior to the invasion, there were 1,064 oil wells in Kuwait, of which 914 were operational. KOC also claims that as a result of the actions of the Iraqi forces, the great majority of these wells and related equipment in the South East, North and West oil fields were extensively damaged, that the oil fires polluted the atmosphere in Kuwait, and that spilled oil produced massive oil lakes and contaminated the surrounding soil. The Panel has previously reviewed evidence supplied by the claimant on this issue and found that these assertions are correct (see report on the Well Blowout Control Claim S/AC.26/1996/5/Annex paragraph 36, p.12; paragraph 85, p.26).

105. KOC alleges that, in addition to the damage caused by the destruction of the oil wells, the failure of the cathodic protection system accelerated the rate of corrosion of many pipelines. The gathering centres and booster stations were also damaged or destroyed from exposure to heat and gunfire.

106. KOC claims that it was forced to make numerous structural and organizational changes to its oil field operations as a result of the destruction. For example, many wells that resumed production after liberation had to be connected to different gathering centres due to the limited availability or functioning of the gathering centres. Where a gathering centre was destroyed to the extent that it could not be

reinstated, any undamaged or repairable components of the gathering centres were generally salvaged and transferred for use at other facilities. KOC produced tables illustrating the structural and organizational changes it had to make in order to resume production as soon as possible using available assets.

107. Iraq argues that costs for additional facilities installed at the gathering centres should be excluded.

108. The Panel notes that KOC acknowledged that additional facilities were installed at the gathering centres due to the structural and organizational changes it had to make to resume production following the liberation of Kuwait from Iraq's unlawful invasion and occupation of Kuwait. As will be seen in the analysis of each of the individual claim element, KOC has made deductions for betterment that it gained in respect of these additional facilities. The Panel finds that KOC's approach to the costs for additional facilities is justified.

109. Iraq alleges that the reconstruction work executed on the wells is not sufficiently detailed by KOC and that the project management costs are unreasonably high.

110. Based on the evidence and inspection work carried out in the oil fields, the Panel is satisfied with the level of detail KOC has provided on the reconstruction work executed on the wells. The Panel also considers that although KOC's project management costs are high, they are justified given the difficult circumstances in which the work had to be carried out.

111. Iraq has also alleged that costs relating to redirecting flowlines should be excluded as they are not repair work but are instead KOC-determined modifications and enhancements. Based on the evidence, the Panel finds that the redirecting of the flowlines was necessary either for KOC to reorganize its gathering centres or to carry out temporary work at its oil fields. The Panel finds, therefore, that these costs are justifiably included by KOC as they are direct costs.

112. Iraq also contends that the valuation methods employed by KOC are inaccurate. The Panel finds that, in general, the valuation methods employed by KOC are acceptable. To the extent that the Panel disagrees with KOC's methods of valuation, the Panel will recommend the adjustments or alternative approaches that it deems appropriate throughout the claim.

113. Except as specifically noted elsewhere in this section, the Panel finds that the oil field assets have been damaged as described by KOC in its claim and supporting evidence. The Panel finds that this damage was the direct result of Iraq's unlawful invasion and occupation of Kuwait. As a result, the Panel finds that, to the extent they are supported by

appropriate evidence, KOC's losses to its oil field assets in Kuwait and in the PNZ are compensable under Security Council resolution 687 (1991) as losses directly resulting from Iraq's unlawful invasion and occupation of Kuwait. Where the Panel finds that a specific claimed loss is not compensable or is not supported by the evidence, this finding is recorded in the section analyzing that loss.

114. As discussed above, KOC operates mainly in the South East oil fields, West oil fields, North oil fields and Wafra oil fields. The oil fields claim element is divided among these operations and the claimed losses relating to each area are discussed in separate sections below.

115. In respect of each claimed loss, the Panel has independently evaluated the extent and the quantification of the losses claimed.

(a) South East oil fields

116. KOC requests compensation in the amount of US$829,245,481 for losses to physical assets in the South East oil fields, which comprise three oil fields: Magwa, Ahmadi and Burgan. KOC asserts that 549 out of 639 oil wells located in the South East oil fields were damaged and that 15 gathering centres sustained major damage, of which four were totally destroyed. Both booster stations suffered from lack of maintenance and other minor damage. Flowlines throughout the South East oil fields were damaged as a result of oil fires or military activity. Other major assets, such as the pumping centre, power station and field administration and service centre, suffered structural damage and required repairs due to the formation of crude and sand crusts on their exteriors. KOC also alleges damage from vandalism of its facilities.

117. KOC's calculations are shown in the following table:

Table 4. South East oil fields claim amounts

Claim item/adjustment	Claimant adjustments (US$)	Claim amount (US$)
(i) Incurred costs		799,015,631
(ii) Adjustments to incurred costs		
a. Betterment	(2,328,435)	(2,328,435)
b. Depreciation	(24,134,029)	(24,134,029)
c. Desalter project (Phase III)	(17,217,686)	(17,217,686)
(iii) Future costs		161,756,000
(iv) Adjustments to future costs		
a. Depreciation	(87,846,000)	(87,846,000)
Total	(131,526,150)	829,245,481

(i) Incurred costs

118. KOC first requests compensation in the amount of US$799,015,631 for costs it incurred in repairing and reinstating the physical facilities at its South East oil fields. Based on its review of the records and other evidence submitted (see paragraphs 85-90, supra), the Panel finds that KOC's incurred costs are correctly stated as US$799,015,631.

(ii) Adjustments to incurred costs

a. Betterment

119. KOC proposes a betterment deduction of US$2,328,435 to its incurred costs to account for improvements it realized when it replaced two control buildings and purchased some new desalter equipment in repairing and restoring the facilities in the South East oil fields. The Panel considers that this proposal accurately accounts for the betterment to KOC's facilities in the South East oil fields. The Panel finds therefore, that a deduction in the amount of US$2,328,435 to incurred costs to adjust for betterment is justified.

b. Depreciation

120. KOC also proposes a deduction in the amount of US$24,149,460 to its incurred costs to account for accumulated depreciation where older facilities were repaired or restored with newer equipment. The Panel's consultants indicated to the Panel that, as a result of a calculation error, KOC erroneously quantified this amount as US$24,134,029.

121. KOC uses a residual value of 10 per cent to calculate depreciation in the amount of US$4,359,948 for the tanks and related facilities at the South East oil fields. The Panel finds, however, based on information provided by its consultants, that five per cent is the industry norm for the tanks and related equipment at issue. After adjusting for the lower residual values for the tanks and related equipment, the Panel finds that the depreciation deduction for those items should be increased to US$4,993,987.

122. KOC uses a residual value of 15 per cent to calculate depreciation in the amount of US$843,028 for permanent buildings at the end of their economic life, i.e., buildings of substantial construction with services connected to ground installations. Because of their likely end of life condition and remote location, however, the Panel's consultants expressed the opinion that such buildings could not command any value on the market at the end of their economic life. The Panel agrees with this point of view and considers that this residual value is too high for such property. The Panel finds that a nominal one per cent residual value should be attributed to property of this nature. After adjusting for the lower residual values for the buildings, the Panel finds that the depreciation deduction for the buildings should be increased to US$1,186,987.

123. KOC uses a residual value of 90 per cent to calculate depreciation in the amount of US$18,946,484 for flowlines laid on the desert surface. During the verification process, however, KOC was unable to substantiate its basis for this estimate, relying instead on its estimation that the flowlines were in extremely good condition prior to the invasion. Based on the evidence provided, including the age of the flowlines and the harsh environment in which the flowlines were located, the Panel concludes that the flowlines had no more than 75 per cent of their useful life remaining. The Panel considers that this is an appropriate residual value and finds that the depreciation deduction for the flowlines should be increased to account for this shorter life. After adjusting for the lower residual values for the flowlines, the Panel finds that the depreciation deduction for the flowlines should be increased to US$47,366,210.

124. Taking into account the further adjustments to the proposed depreciation deduction discussed above, the Panel finds that a total

depreciation deduction of US$53,547,184 should be made to KOC's claim for incurred costs at the South East oil fields.

c. Desalter Phase III project

125. KOC proposes a deduction in the amount of US$17,217,686 to its incurred costs to account for remaining costs to complete its Desalter Phase III project that it had included in its incurred costs. At the time of the invasion, KOC had commenced work on a Desalter Phase III project. Following liberation, the damage to the Desalter Phase III project was repaired and the project was completed. The entire cost of this work - both the repair and the completion - is included within KOC's incurred costs claim amount.

126. KOC correctly identified the need to deduct US$11,569,033 from the claim for incurred costs for the part of the Desalter Phase III project that was incomplete at the time of the invasion but which was completed during restoration work. KOC also proposed a further deduction of US$5,648,653 to reflect an anticipated price increase of 10 per cent to complete the Desalter Phase III project. The Panel finds that these estimated deductions are supported by the evidence. The Panel finds, therefore, a deduction of US$17,217,686 from incurred costs to account for the costs of completing the Desalter Phase III project should be made.

(iii) Future costs

127. KOC also requests compensation in the amount of US$161,756,000 for the estimated future costs it expects to incur to complete the reconstruction of the South East oil field facilities. This amount includes estimated costs of repair and reinstatement to KOC's facilities as well as an allowance to cover contingencies, design review, commissioning costs, KOC staff support and debris removal for a number of facilities within the South East oil fields. The allowance is calculated as 30 per cent of the estimated asset-related costs.

128. The Panel finds that the estimated future costs for the repair or reinstatement of the remaining facilities are supported by the evidence.

129. The Panel finds, however, that the allowance of 30 per cent included in the future costs is overstated. First, the allowance included for KOC staff costs is not appropriate. An international oil company such as KOC, ordinarily funds internal design and project management personnel as part of its normal operations. The Panel finds that KOC may not claim compensation for such costs, if they would have been incurred in the course of KOC's normal operations. Thus, a reduction in the allowance is appropriate. A deduction in this respect is consistent with the earlier findings of the Panel in the WBC claim. A further reduction in the

allowance was made for general contingencies, design review and debris removal, for which the Panel made an adjustment to take into account a nominal credit for scrap recovery. Based on the opinion of the Panel's consultants and the above analysis, the Panel agrees and finds that an allowance of 20 per cent is more appropriate for the contingencies identified by KOC and reduces the claimed allowance accordingly.

130. After adjusting for the reduced allowances, the Panel finds that KOC's estimated future costs for the South East oil fields should be US$149,313,231.

(iv) Adjustments to future costs

a. Depreciation

131. KOC proposes a deduction in the amount of US$87,846,000 from its claim for future estimated costs to account for accumulated depreciation where older facilities will be repaired or restored with newer equipment. Based on its findings regarding the appropriate residual values for tanks, related equipment and buildings, discussed in paragraphs 121-122, supra, the Panel finds that the depreciation deductions from future estimated costs are understated. The Panel considers that a revised depreciation deduction should be calculated using the adjusted residual values for estimated future costs, and therefore finds that KOC's deduction for estimated future costs should be increased to US$93,674,724.

132. In summary, the Panel recommends compensation for KOC's claim for the South East oil fields in the amount of US$781,560,833, as itemized in the following table:

Table 5. South East oil fields recommended compensation

Claim item/adjustment	Claim amount and adjustments (US$)	Panel's adjustments to claimants amounts (US$)	Recommended compensation (US$)
(i) Incurred costs	799,015,631		799,015,631
(ii) Adjustments to incurred costs			
a. Betterment	(2,328,435)		(2,328,435)
b. Depreciation	(24,134,029)	(29,413,155)	(53,547,184)
c. Desalter Phase III project	(17,217,686)		(17,217,686)
(iii) Future costs	161,756,000	(12,442,769)	149,313,231
(iv) Adjustments to future costs			
a. Depreciation	(87,846,000)	(5,828,724)	(93,674,724)
Total	829,245,481	(47,684,648)	781,560,833

(b) West oil fields

133. KOC requests compensation in the amount of US$190,643,380 for losses to physical assets in the West oil fields. KOC asserts that 71 out of 80 wells were damaged, three gathering centres were a total loss, and that one booster station was damaged by shrapnel, exposure to well fires and oil lakes. KOC also alleges that the Abduliyah Water Centre and two pilot water injection plants were virtually destroyed and that flowlines were damaged as a result of oil lake fires or military activity. KOC further alleges vandalism on its assets.

134. KOC's calculations are shown in the following table:

Table 6. West oil fields claim amounts

Claim item/adjustment	Claimant adjustments (US$)	Claim amount (US$)
(i) Incurred costs		110,043,615
(ii) Adjustments to incurred costs		
a. Depreciation	(12,620,635)	(12,620,635)
(iii) Future costs		172,209,000
(iv) Adjustments to future costs		
a. Depreciation	(78,988,600)	(78,988,600)
Total	(91,609,235)	190,643,380

(i) Incurred costs

135. KOC first requests compensation in the amount of US$110,043,615 for costs it incurred in repairing and reinstating the physical facilities at its West oil fields. Based on its review of the records and other evidence submitted (see paragraphs 85-90, supra), the Panel concludes that KOC's incurred costs are correctly stated and finds, therefore, that costs are US$110,043,615.

(ii) Adjustments to incurred costs

a. Depreciation

136. KOC proposes a depreciation deduction of US$12,620,571 to its incurred costs to account for accumulated depreciation where older facilities were repaired or restored with newer equipment. The Panel's consultants indicated to the Panel that, as a result of a calculation error, KOC erroneously quantified this amount as US$12,620,635.

137. KOC uses a residual value of 10 per cent to calculate depreciation in the amount of US$9,795,921 for the tanks and related facilities in the West oil fields. The Panel finds, however, based on information provided by its consultants, that five per cent is the industry norm for the tanks and related equipment. After adjusting for the lower residual value of the tanks and the related equipment, the Panel finds that the depreciation deduction for these items should be increased to US$9,952,863.

138. KOC uses a residual value of 90 per cent to calculate depreciation in the amount of US$2,824,650 for the flowlines laid on the desert surface. As discussed in paragraph 123, supra, the Panel finds that this residual value is overstated and that a 75 per cent residual value should be attributed to property of this nature. After adjusting for the lower residual value for the flowlines, the Panel finds that the depreciation deduction for the flowlines should be increased to US$7,061,625.

139. Taking into account the further adjustments to the proposed depreciation deduction discussed above, the Panel finds that a total depreciation deduction of US$17,014,488 should be made to the claim for incurred costs at the West oil fields.

(iii) Future costs

140. KOC also requests compensation in the amount of US$172,209,000 for the estimated future costs it expected to incur to complete the reconstruction of the West oil field facilities. This claim amount includes estimated costs of repair and reinstatement to KOC's facilities as well as an allowance to cover contingencies, design review, commissioning costs, KOC staff support and debris removal for a number of facilities within the West oil fields. The allowances are calculated as 30 per cent of the estimated asset-related future costs.

141. Based on the evidence, the Panel finds that the estimated future costs for the repair or replacement of the remaining facilities are justified.

142. The Panel finds, however, as discussed in paragraph 129, supra, that the allowance of 30 per cent included in the future costs is overstated. The Panel finds that 20 per cent is a more appropriate allowance for the contingencies identified by KOC and reduces the claimed allowance accordingly.

143. After adjusting for the reduced allowances, the Panel finds that KOC's estimated future costs for the West oil fields should be US$158,962,154.

(iv) Adjustments to future costs

a. Depreciation

144. KOC proposes a deduction in the amount of US$78,988,600 from future estimated costs to account for accumulated depreciation where older facilities will be repaired or restored with newer equipment. Based on its findings regarding the appropriate residual values for tanks, related

equipment and flowlines, discussed in paragraphs 121-123, supra, the Panel finds that the depreciation deductions from future estimated costs are understated. The Panel calculates a revised depreciation deduction for estimated future costs of US$86,763,698 and finds that KOC's deduction for estimated future costs should be increased to this amount.

145. In summary, the Panel recommends compensation for KOC's claim for the West oil fields in the amount of US$165,227,583 as itemized in the following table.

Table 7. West oil fields recommended compensation

Claim item/adjustment	Claim amount and deductions (US$)	Panel's adjustments to claimant amounts (US$)	Recommended compensation (US$)
(i) Incurred costs	110,043,615		110,043,615
(ii) Adjustments to incurred costs			
a. Depreciation	(12,620,635)	(4,393,853)	(17,014,488)
(iii) Future costs	172,209,000	(13,246,846)	158,962,154
(iv) Adjustments to future costs			
a. Depreciation	(78,988,600)	(7,775,098)	(86,763,698)
Total	190,643,380	(25,415,797)	165,227,583

(c) North oil fields

146. KOC requests compensation in the amount of US$359,789,088 for losses to physical assets in the North oil fields. KOC asserts that 178 out of 195 wells were damaged, three gathering centres were totally destroyed and that the remaining two gathering centres sustained major damages. One booster station suffered damage from oil fires. KOC also alleges that the Iraqi forces damaged the gas system by filling it with oil. Flowlines were damaged as a result of oil lake fires or military activity. KOC further alleges vandalism on its assets.

147. KOC's calculations are shown in the following table:

Table 8. North oil fields claim amounts

Claim item/adjustment	Claimant adjustments (US$)	Claim amount (US$)
(i) Incurred costs		164,645,090
(ii) Adjustments to incurred costs		
a. Depreciation	(7,395,752)	(7,395,752)
(iii) Future costs		296,927,000
(iv) Adjustments to future costs		
a. Depreciation	(94,387,250)	(94,387,250)
Total	(101,783,002)	359,789,088

(i) Incurred costs

148. KOC first requests compensation in the amount of US$164,645,090 for costs it incurred in repairing and reinstating the physical facilities at its North oil fields. Based on their review of the records and other evidence submitted (see paragraphs 85-90, supra), the Panel concludes that KOC's incurred costs are correctly stated and finds, therefore, that costs are US$164,645,090.

(ii) Adjustments to incurred costs

a. Depreciation

149. KOC proposes a deduction in the amount of US$7,395,752 to its incurred costs to account for accumulated depreciation where older facilities were repaired or restored with newer equipment.

150. KOC uses a residual value of 10 per cent to calculate depreciation in the amount of US$3,389,244 for tanks and related equipment and plant equipment in the North oil fields. The Panel finds, however, based on information provided by its consultants, that five per cent is the industry norm for the tanks and related equipment at issue. After adjusting for the lower residual value for the tanks and related equipment, the Panel finds that the depreciation deduction for these items should be increased to US$3,973,903.

151. KOC uses a residual value of 15 per cent to calculate depreciation in the amount of US$71,750 for permanent buildings at the end of their economic life i.e. buildings of substantial construction with services connected to ground installations. As discussed at paragraph 122, supra, the Panel finds that this residual value is overstated and that a nominal one per cent residual value should be attributed to property of this nature. After adjusting for the lower residual value for the buildings, the Panel finds that the depreciation deduction for these items should be increased to US$88,970.

152. KOC uses a residual value of 90 per cent to calculate depreciation in the amount of US$3,962,009 for the North oil fields flowlines laid on the desert surface. As discussed in paragraph 123, supra, the Panel finds that this residual value is overstated and that a 75 per cent residual value should be attributed to property of this nature. After adjusting for the lower residual value for the flowlines, the Panel finds that the depreciation deduction for the flowlines should be increased to US$9,905,022.

153. Taking into account the further adjustments discussed above, the Panel finds that a depreciation deduction of US$13,967,895 should be made to the claim for incurred costs at the North oil fields.

(iii) Future costs

154. KOC also requests compensation in the amount of US$296,927,000 for the estimated future costs it expected to incur to complete the reconstruction of the North oil field facilities. This amount includes estimated costs of repair and reinstatement of KOC's facilities as well as an allowance to cover contingencies, design review, commissioning costs, KOC staff support and debris removal for a number of facilities within the North oil fields. The allowances are calculated as 30 per cent of the estimated asset-related future costs.

155. The Panel finds that the estimated future costs for the repair or reinstatement of the remaining facilities are supported by the evidence.

156. The Panel finds, however, as discussed in paragraph 129, supra, that the allowance of 30 per cent included in the future costs is overstated. The Panel finds that 20 per cent is a more appropriate allowance for the contingencies identified by KOC and reduces the claimed allowance accordingly.

157. After adjusting for the reduced allowances, the Panel finds that KOC's estimated future costs for the North oil fields are US$274,086,642.

(iv) Adjustments to future costs

a. Depreciation

158. KOC proposes depreciation deductions from its claim for future estimated costs of US$94,387,250. Based on its findings regarding the appropriate residual values for tanks and related equipment, buildings and flowlines, discussed in paragraphs 121-123, supra, the Panel finds that KOC's depreciation deductions from future estimated costs for these items are understated. The Panel calculates a revised depreciation deduction for estimated future costs of US$106,600,895 and finds that KOC's deduction for estimated future costs should be increased to this amount.

159. In summary, the Panel recommends compensation for KOC's claim for the North oil fields in the amount of US$318,162,942, as itemized in the following table.

Table 9. North oil fields recommended compensation

Claim item/adjustment		Claim amount and deductions (US$)	Panel's adjustments to claimant amounts (US$)	Recommended compensation (US$)
(i)	Incurred costs	164,645,090		164,645,090
(ii)	Adjustments to incurred costs			
	a. Depreciation	(7,395,752)	(6,572,143)	(13,967,895)
(iii)	Future costs	296,927,000	(22,840,358)	274,086,642
(iv)	Adjustments to future costs			
	a. Depreciation	(94,387,250)	(12,213,645)	(106,600,895)
Total		359,789,088	(41,626,146)	318,162,942

(d) Wafra oil fields

160. KOC requests compensation in the amount of US$52,854,617 for losses to physical assets in the Wafra oil fields which comprise the main Wafra field, South Fuwaris field and South Umm Gudair. As discussed in paragraphs 75-76, supra, and 356, infra, KOC conducts joint operations with SAT (the "JO") in the Wafra oil fields which are situated onshore in the PNZ. Certain assets are jointly owned by KOC and SAT, are purchased on a joint account and are known as JO assets. KOC states that each asset is

assigned a reference number on acquisition, and a register of these assets is maintained.

161. KOC alleges that substantial damage to its assets was incurred in the Wafra oil fields except in the South Fuwaris area. Even though the oil wells and facilities were exposed to sabotage and military hostilities, KOC acknowledges that the Wafra fields were spared from extensive damage caused by oil well fires and oil spillage. KOC alleges that about 40 wells were on fire or spilling oil onto the surface. KOC also alleges that 293 out of 358 wells were damaged by explosives and that, in addition, 14 out of 20 sub-gathering centres suffered major damage mainly due to explosions and consequent fires, the main gathering centre sustained major damage and most storage tanks were destroyed. KOC further alleges that it lost its Eocene well core sample. KOC states that flowlines were damaged as a result of oil lake fires or military activity and that the Wafra camp buildings sustained substantial damage as well.

162. Following the liberation of Kuwait, KOC states that reinstatement works in the Wafra oil fields consisted of extinguishing well fires, clearing unexploded ordnance and repairing wells to resume production. KOC also states that repairs to the wells included fishing to recover downhole debris and parts from damaged pumping units. KOC further states that pumping units at the wells were repaired or replaced, sometimes with units from other wells. For the reinstatement of Wafra oil fields, it was agreed between SAT and KOC that reinstatement costs related to the invasion and occupation would be shared equally. The agreement applied to all assets in the PNZ except for oil and gas transmission lines, for which each party would be separately responsible.

163. Based on the evidence, the Panel finds that KOC's physical assets in the Wafra oil fields have been damaged as alleged by KOC and that this damage is the direct result of Iraq's unlawful invasion and occupation of Kuwait.

164. Due to the JO with SAT, KOC calculates this claim element in a slightly different manner from that used in respect of other oil field claims. As noted previously, KOC's claim amount consists of costs incurred prior to the date of preparation of the claim to repair and reinstate its facilities plus the estimated future costs to complete this work. KOC includes in the incurred costs portion of the Wafra claim amount both its own incurred costs and the full amount of the JO's incurred costs. From the total of these incurred costs, KOC proposes to deduct 50 per cent of the JO incurred costs to account for the fact that it had only a 50 per cent share in the JO and, thus, incurred only 50 per cent of the costs. KOC applies a similar approach to estimated future costs. KOC's calculations are shown in the following table:

Table 10. Wafra oil fields claim amounts

	Claim item/adjustment	Claimant adjustments (US$)	Claim amount (US$)
(i)	Incurred costs - KOC		12,431,904
(ii)	Incurred costs - JO		47,852,083
(iii)	Adjustments to incurred costs - JO		
	a. JO Ownership deduction	(23,926,041)	(23,926,041)
(iv)	Future costs		52,968,900
(v)	Adjustments to future costs		
	a. Depreciation	(19,975,558)	(19,975,558)
	b. JO Ownership deduction	(16,496,671)	(16,496,671)
Total		(60,398,270)	52,854,617

(i) Incurred costs - KOC

165. KOC first requests compensation in the amount of US$12,431,904 for costs it incurred in repairing and reinstating the physical facilities at its Wafra oil fields. KOC's claim includes the costs to replace one 12-inch pipeline and one 16-inch pipeline, both running from the Wafra oil fields to refineries on the Kuwaiti coast.

166. Iraq alleges that certain components in the costs incurred on the 12-inch pipeline and the 16-inch pipeline are overstated.

167. Based on the Panel's review of the records and other evidence submitted (see paragraphs 85-90, supra), it concludes that KOC's incurred costs on certain assets are overstated except for the 12-inch pipeline. KOC was also unable to supply adequate information in support of the whole amount claimed for KOC's incurred costs.

168. KOC requests compensation in the amount of US$1,529,333 for the replacement cost of a 12-inch pipeline. Based on the evidence, the Panel is of the opinion that the costs of the 12-inch pipeline were correctly stated as US$1,529,333 and that the damage to this asset was a result of Iraq's unlawful invasion and occupation of Kuwait. The Panel finds, therefore, that the costs of the 12-inch pipeline are US$1,529,333.

169. KOC requests compensation in the amount of US$10,902,571 for the replacement cost of a 16-inch pipeline. Although the evidence supplied by KOC does confirm the original cost of the 16-inch pipeline, it does not adequately support KOC's claim that the 16-inch pipeline was a total loss. In fact, the damage assessment reports covering the 16-inch pipeline estimated that this pipeline had been damaged only in a minimal amount, quantified at 10 per cent. The Panel's consultants calculated that the reasonable replacement cost for the 16-inch pipeline, including installation, would have been approximately US$15,000,000. The Panel finds, therefore, that the amount of this claim item should be reduced to 10 per cent of the replacement cost or US$1,500,000.

170. Based on the foregoing analysis, the Panel finds that the KOC incurred costs should be reduced to US$3,029,333.

(ii) Incurred costs - JO

171. KOC requests compensation in the amount of US$47,852,083 for costs it incurred in repairing and reinstating the JO's physical facilities at its Wafra oil fields. Based on their review of the records and other evidence submitted (see paragraphs 85-90, supra), the Panel concludes that the JO incurred costs were overstated by a small amount. Specifically, KOC understated accumulated depreciation on certain assets included in this item of the claim by US$1,146,550. The Panel therefore finds that the JO incurred costs should be reduced to US$46,705,533.

(iii) Adjustments to incurred costs - JO

a. JO Ownership deduction

172. KOC also proposes a deduction in the amount of US$23,926,041 to its incurred JO costs. Because KOC's proposed JO claim amount includes 100 per cent of the total JO costs, it was necessary for KOC to deduct the 50 per cent that related to SAT's potential claim. The Panel agrees with this approach. The Panel finds, however, that the deduction should be limited to US$23,352,766, which represents 50 per cent of the incurred JO costs as found by the Panel in paragraph 171, supra, which represents a further reduction of US$573,275 to the claimed amount.

173. The Panel notes that the compensation to be awarded to KOC for its share of the JO incurred costs at Wafra is less than the amount recommended for SAT. (See paragraph 427, infra.) The difference in recommended awards is the result of the different approaches used by these claimants. As noted, KOC relied extensively on estimated costs. SAT, however, filed an amended claim in 1997 that included actual incurred cost figures for the JO assets at Wafra. KOC declined the opportunity to rely on SAT's

calculations. Thus, the Panel's recommended award is based on KOC's estimated costs, which are lower than the actual costs incurred.

(iv) Future costs

174. KOC also requests compensation in the amount of US$52,968,900 for the estimated future costs it expected to incur to complete the repair and reinstatement of the Wafra oil field facilities. These estimated future costs include replacement and/or repair costs for abandoned and unfished wells, pumping units, flowlines/transmission lines, sub-gathering centres, the main gathering centre and KOC's Wafra camp.

175. Iraq alleges that it is unreasonable for KOC to assume a two per cent failure in well fishing operations for cased Eocene wells and therefore the cost of drilling new wells should be excluded. Iraq further alleges that it is unnecessary to compensate for drilling of a new well to obtain core samples for a field already in production phase. Finally, Iraq disputes that KOC's allocation for the overhaul of its pumping units is due to damage caused by military operations.

176. Based on the evidence, the Panel finds that KOC's assumption in the well fishing operations for the cased Eocene wells is reasonable in the circumstances, where the majority of the wells were damaged. The Panel also finds that KOC had lost its core samples as it had alleged and needed to drill a new well to obtain core samples as some of its wells had been abandoned, could not be successfully fished and had not resumed production. Accordingly, the Panel finds that including the claim for the cost of drilling new wells is justified. Further, based on the evidence, the Panel finds that as a result of Iraq's unlawful invasion and occupation of Kuwait, KOC's pumping units were neglected and not properly maintained. The Panel finds, therefore, that the cost of overhauling pumping units is a cost in addition to KOC's maintenance cost in the ordinary course of its business, and therefore compensable.

177. The Panel also finds, however, that KOC's proposed residual value of 10 per cent for its subgathering centres in Wafra oil fields is overstated. The Panel finds that based on the information provided by its consultants, a residual value of five per cent is the industry norm for assets such as the subgathering centres at issue. After adjusting for the lower residual value for the subgathering centres, the Panel finds that a deduction of US$1,368,150 should be made to the claim for future estimated costs. Taking into account this adjustment, the Panel finds that the estimated future costs at Wafra oil fields should be reduced to US$51,600,750.

(v) Adjustments to future costs

a. Depreciation deductions

178. KOC proposes a deduction in the amount of US$19,975,558 to its claim for future estimated costs to account for accumulated depreciation where older facilities will be repaired or restored with newer equipment.

179. KOC uses a residual value of 10 per cent to calculate depreciation for tanks and related equipment, as well as plant equipment, in the Wafra oil fields. As discussed in paragraph 121, supra, the Panel finds that this residual value is overstated and that five per cent is the industry norm for the items.

180. KOC also uses a residual value of 15 per cent to calculate depreciation for permanent buildings at the end of their economic life. As discussed in paragraph 122, supra, the Panel finds that this residual value is overstated and that a nominal one per cent residual value should be attributed to property of this nature.

181. Taking into account the adjustments to depreciation discussed above, the Panel finds that a depreciation deduction of US$24,288,149 should be made to the claim for future estimated costs at the Wafra oil fields.

b. JO ownership deductions

182. KOC proposes a JO ownership deduction in the amount of US$16,496,671 to its claim for estimated future costs. Based on the reductions to the JO estimated future costs made above, the Panel also finds that the JO ownership deduction should be reduced to US$13,656,300, or 50 per cent of the total accepted JO future estimated costs.

183. In summary, the Panel recommends compensation for KOC's claim for the Wafra oil fields in the amount of US$40,038,401, as itemized in the following table:

Table 11. Wafra oil fields recommended compensation

Claim item/adjustment		Claim amount and deductions (US$)	Panel's adjustments to claimant amounts (US$)	Panel's recommended compensation (US$)
(i)	Incurred costs-KOC	12,431,904	(9,402,571)	3,029,333
(ii)	Incurred costs-JO	47,852,083	(1,146,550)	46,705,533
(iii)	Adjustments to JO incurred costs			
	a. JO Ownership Deduction	(23,926,041)	573,275	(23,352,766)
(iv)	Future costs - JO	52,968,900	(1,368,150)	51,600,750
(v)	Adjustments to JO future costs			
	a. Depreciation	(19,975,558)	(4,312,591)	(24,288,149)
	b. JO Ownership Deduction	(16,496,671)	2,840,371	(13,656,300)
Total		52,854,617	(12,816,216)	40,038,401

2. The Ahmadi Township

184. KOC requests compensation in the amount of US$23,574,096 for losses to physical assets in the Ahmadi Township. KOC alleges that Iraqi troops occupied the Ahmadi Township and that damage was caused by inter alia, looting, arson and vandalism. KOC also alleges that damage to the structures in the township was further caused by airborne attack, bombing, resulting fires and smoke deposits from well fires.

185. Iraq alleges that the allowance for future repair for the remaining buildings is unjustified since the buildings have not suffered any damage and that a number of KOC employees were living in normal conditions in the Ahmadi Township during the hostilities. Iraq also disputes the assumption by KOC's consultants that all residential houses were damaged to a certain degree.

186. Based on the evidence, the Panel finds that KOC's physical assets in the Ahmadi Township have been damaged as alleged by KOC and that this damage is the direct result of Iraq's unlawful invasion and occupation of Kuwait. To the extent the Panel disagrees with the assumptions and

valuation method of KOC's consultants, the Panel will specifically indicate that in the analysis of this claim element.

187. KOC's calculations are shown in the following table:

Table 12. Ahmadi Township claim amounts

Claim item/adjustment	Claimant adjustments (US$)	Claim amount (US$)
(a) Incurred costs		16,804,111
(b) Future costs		46,189,900
(c) Adjustments to future costs		
(i) Depreciation	(15,479,400)	
(d) Adjustments to residual value	(23,940,515)	
Total	(39,419,915)	23,574,096

(a) Incurred costs

188. KOC first requests compensation in the amount of US$16,804,111 for costs it incurred in repairing and reinstating the physical facilities at Ahmadi Township. Based on their review of the records and other evidence submitted (see paragraphs 85-90, supra), the Panel concludes that KOC's incurred costs are correctly stated and finds that these costs are US$16,804,111.

(b) Future costs

189. KOC also requests compensation in the amount of US$46,189,900 for the estimated future costs to complete the reconstruction of the Ahmadi Township. This amount includes, among other items, estimated costs for KOC materials used by KOC's employees to repair their housing units, industrial buildings repair allowance and replacement costs for playground equipment.

190. KOC requests compensation in the amount of US$1,582,000 for costs of KOC materials that were allegedly used by KOC's employees to repair their housing units in Ahmadi. The Panel's consultants could not verify this amount based on the evidence submitted or during the verification exercise. The Panel finds, therefore, that these costs are not supported by the evidence and should be deducted from KOC's estimated future costs.

191. KOC requests compensation in the amount of US$1,500,000 for an industrial buildings repair allowance. The Panel's consultants could not verify the exact nature of items upon which this allowance would be spent. The buildings that have been repaired and estimates of outstanding work were already accounted for under the incurred costs and estimates for outstanding works. Based on the evidence, the Panel finds that this allowance is not appropriate and should be deducted from KOC's estimated future costs.

192. KOC requests compensation for replacement costs of US$522,000 for playground equipment and of US$360,000 for trees and plants. The Panel's consultants could not verify the full claim amount for the playground items and advised to the Panel that US$50,000 would be a reasonable replacement cost for these items. The Panel's consultants also advised that the replacement of trees and plants was a small project and therefore proposed the amount of US$50,000 as the reasonable replacement cost for this project. Based on the evidence, the Panel adopts the proposals of its consultants and finds that deductions for replacement costs of US$472,000 and US$310,000 should be made to KOC's estimated future costs.

193. After adjusting for reduced costs and allowance, the Panel finds that KOC's justified estimated future costs for completing the reconstruction of the Ahmadi Township should be US$42,325,900.

(c) Adjustments to future costs

(i) Depreciation

194. KOC proposes a deduction in the amount of US$15,479,400 to future estimated costs to account for accumulated depreciation where older facilities will be repaired or restored with newer equipment.

195. KOC uses a residual value of 15 per cent to calculate depreciation for permanent buildings at the end of their economic life. The Panel finds that this residual value is overstated and that a nominal one per cent residual value should be attributed to property of this nature.

196. After adjusting for the lower residual value for the buildings, the Panel finds that a depreciation deduction of US$21,956,150 should be made to KOC's claim for estimated future costs at the Ahmadi Township.

(d) Adjustments to residual value

197. KOC proposes a residual value of US$23,940,515 for its assets in the Ahmadi Township.

198. KOC uses a residual value of 15 per cent to calculate the remaining life of its assets in the Ahmadi Township. The Panel considers that this residual value is overstated and that a nominal one per cent residual value should be attributed to property of this nature.

199. After adjusting for the lower residual value for these assets, the Panel finds that a deduction of US$19,817,743 should be made to KOC's claim amount for the Ahmadi Township.

200. In summary, the Panel recommends compensation for KOC's claim for the Ahmadi Township in the amount of US$17,356,118, as itemized in the following table:

Table 13. Ahmadi Township recommended compensation

Claim item/adjustment	Claim amount and adjustments (US$)	Panel's recommended adjustments (US$)	Panel's recommended compensation (US$)
(a) Incurred costs	16,804,111		16,804,111
(b) Future costs	46,189,900	(3,864,000)	42,325,900
(c) Adjustments to future costs			
(i) Depreciation	(15,479,400)	(6,476,750)	(21,956,150)
(d) Adjustments to residual values	(23,940,515)	4,122,772	(19,817,743)
Total	23,574,096	(6,217,978)	17,356,118

3. North and South tank farms

201. KOC requests compensation in the amount of US$148,029,763 for losses to physical assets in the North and South tank farms. KOC alleges that the Iraqi forces had wired explosives to the oil and water storage tanks during the occupation and that the detonation of these explosives resulted in fires which either destroyed or damaged the storage tanks. KOC contends that, at the South tank farm, 15 out of 36 crude tanks were damaged or destroyed, and four out of 14 water tanks were destroyed. KOC asserts that, at the North tank farm, eight out of 24 tanks were destroyed or damaged. KOC further states that the Ahmadi tank farm Control Room sustained major damage and that manifolds were either damaged or destroyed. In addition, KOC maintains that there was further damage such as from bullets, shrapnel and blasts resulting from the military hostilities. KOC acknowledges, however, that certain tank farms suffered no structural damage.

202. Based on the evidence, the Panel finds that KOC's physical assets in the North and South tank farms have been damaged as alleged by KOC and that this damage is the direct result of Iraq's unlawful invasion and occupation of Kuwait.

203. KOC's calculations are shown in the following table:

Table 14. North and South tank farms claim amounts

Claim item/adjustment	Claimant adjustments (US$)	Claim amount (US$)
(a) Incurred costs		193,864,443
(b) Adjustments		
(i) Betterment	(9,016,410)	(9,016,410)
(ii) Depreciation	(37,964,430)	(37,964,430)
(c) Future costs		1,146,160*
Total	(46,980,840)	148,029,763

* The claimant incorrectly summed this claim element to US$1,146,160; the Panel uses the correct total for this claim amount of US$1,164,160.

(a) Incurred costs

204. KOC first requests compensation in the amount of US$193,864,443 for costs it incurred in repairing and reinstating the physical facilities at its North and South tank farms. Iraq alleges that there is an error in the figures quoted for the cost of tank construction in phase II. Based on its review of the records and other evidence submitted (see paragraphs 85-90, supra), the Panel concludes that KOC's incurred costs are correctly stated and finds, therefore, that such costs are US$193,864,443.

(b) Adjustments to incurred costs

(i) Betterment

205. KOC proposes a betterment deduction of US$9,016,410 to its incurred costs to account for the increase in capacity of the tanks at the North and South tank farms that was achieved during the rebuilding phase. KOC calculates that it achieved a net gain in storage capacity of 793,000 barrels. KOC estimates that, based on actual cost data, the nominal cost for the construction of new tanks was US$11.37 per barrel. Thus, KOC proposes to deduct US$9,016,410 (793,000 barrels x US$11.37 per barrel) from the claim. The evidence presented shows, however, that KOC actually realized an increase in capacity of 843,235 barrels. Applying the per

barrel cost for this additional capacity, the Panel finds therefore, that a deduction in the amount of US$9,587,582 for betterment is justified.

206. Iraq alleges that there should be a further betterment deduction for the net gain in water storage capacity, because some of the tanks were repaired and converted into water tanks. As indicated above, the Panel has taken into account the betterment resulting from increased storage capacity for both water and oil.

(ii) Depreciation deduction

207. KOC also proposes a deduction in the amount of US$37,964,430 to its incurred costs to account for accumulated depreciation where older facilities were repaired or restored with newer equipment.

208. KOC proposes a residual value of 15 per cent to calculate depreciation for the tanks and related equipment at the North and South tank farms. The Panel finds, however, based on information provided by its consultants, that five per cent is the industry norm for the tanks and related equipment at issue.

209. After adjusting for the lower residual value for the tanks and related equipment, the Panel finds that a depreciation deduction of US$45,313,183 should be made to KOC's claim for incurred costs at the North and South tank farms.

(c) Future costs

210. KOC also requests compensation in the amount of US$1,164,160 for the estimated future costs it expected to incur to complete the reconstruction of the North and South tank farms facilities. The Panel's consultants indicated to the Panel that, as a result of a typographic error, KOC stated this amount as US$1,146,160.

211. Based on the evidence, the Panel finds that the estimated future costs for the repair or reinstatement of the remaining facilities are justified.

212. After adjusting for the arithmetical error, the Panel finds that KOC's justified estimated future costs for the North and South tank farms are US$1,164,160.

213. In summary, the Panel recommends compensation for KOC's claim for the North and South tank farms in the amount of US$140,127,838, as itemized in the following table:

Table 15. North and South tank farms recommended compensation

Claim item/adjustment	Claim amount and deductions (US$)	Adjustments to claimant amounts (US$)	Recommended compensation (US$)
(a) Incurred costs	193,864,443		193,864,443
(b) Adjustments to incurred costs			
(i) Betterment	(9,016,410)	(571,172)	(9,587,582)
(ii) Depreciation	(37,964,430)	(7,348,753)	(45,313,183)
(c) Future costs	1,164,160		1,164,160
Total	148,047,763	(7,919,925)	140,127,838

4. Marine facilities

214. KOC requests compensation in the amount of US$97,295,889 for losses to physical assets at its marine facilities. KOC alleges that its marine facilities were damaged or destroyed mainly from aerial bombardment and consequent fires and in particular, that Sea Island, a fixed-platform export facility, was totally destroyed. KOC also alleges that the 48-inch crude and 20-inch bunker fuel pipeline risers connected to the central loading platform at Sea Island were destroyed, severing the export link with KOC's onshore facilities. KOC asserts that it had to divert exports by pipeline to the Single Point Mooring, a previously-decommissioned loading buoy, moored offshore. KOC states that this necessitated urgent repairs and relocation work on Sea Island and the connected pipeline risers, as well as the refurbishment of the Single Point Mooring. KOC alleges that the Single Point Mooring was not recommissioned until May 1993 due to the substantial work required. KOC asserts that, pending completion of these repairs, it had to use alternative options to facilitate the export of oil.

215. KOC alleges that during the occupation, its Small Boat Harbor was used for military operations by the Iraqis and that damage was incurred from misuse, vandalism and looting. KOC states that much of the harbour also suffered damage from missiles and explosives.

216. Iraq alleges that the Single Point Mooring did not suffer any direct damage and therefore, Iraq is not responsible for its rehabilitation.

217. Based on the evidence, the Panel finds that KOC's physical assets at the marine facilities have been damaged as alleged by KOC and that this damage is the direct result of Iraq's unlawful invasion and occupation of

Kuwait. The Panel finds that KOC recommissioned the Single Point Mooring to handle export loading to mitigate its loss with respect to its destroyed Sea Island. Further, the Panel finds that KOC has substituted two continuously-anchored leg mooring buoys (or "CALM buoys"), and intends to add further CALM buoys as its ultimate replacement for Sea Island.

218. Iraq also alleges that there is a possible duplication between the claim for overhead allocation costs and KOC's WBC claim. Based on the evidence, the Panel finds that, in general, possibilities of duplication have been appropriately addressed and accounted for by KOC. To the extent that they have not been addressed, the Panel will specifically indicate that and make adjustments as it deems appropriate.

219. KOC's calculations are shown in the following table:

Table 16. Marine facilities claim amounts

Claim item/adjustment	Claimant's adjustments (US$)	Claim amount (US$)
(a) Incurred costs		46,486,934
(b) Future costs		100,487,387
(c) Adjustments to future costs		
(i) Depreciation	(49,678,432)	(49,678,432)
Total	(49,678,432)	97,295,889

(a) Incurred costs

220. KOC first requests compensation in the amount of US$46,486,934 for costs it incurred in repairing and reinstating the physical facilities at its marine facilities. Based on their review of the records and other evidence submitted (see paragraphs 85-90, supra), the Panel concludes that KOC's incurred costs are correctly stated and finds, therefore, that such costs are US$46,486,934.

(b) Future costs

221. KOC also requests compensation in the amount of US$100,487,387 for the estimated future costs it expected to incur to complete the reconstruction of the marine facilities. This claim includes the estimated costs of reinstating both Sea Island (US$82,797,387) and the Small Boat Harbour (US$2,510,000), as well as the estimated costs of removing the debris of Sea Island (US$15,180,000).

222. Iraq asserts that the assessment of overhead costs (comprising percentages of escalation and contingency costs) for KOC's marine facilities and the average service life of Sea Island are overstated.

223. Based on the evidence and taking into consideration Iraq's arguments, the Panel finds that the estimated future costs for the repair or reinstatement of the marine facilities are justified, subject to the adjustments described below.

224. The Panel finds, however, that KOC's estimates to replace Sea Island are overstated. KOC estimates that the future replacement cost of Sea Island would be US$82,797,387. KOC estimated the cost to replace the facility using 1994 prices escalated to reflect the time needed for reconstruction. The evidence indicates, however, that KOC has not rebuilt Sea Island nor does it intend to do so. In fact, KOC has adopted a new, more costly method for loading ships, the CALM buoys discussed in paragraph 217, supra. For this reason, the Panel finds that the appropriate measure of KOC's loss for Sea Island would be the replacement cost of Sea Island at the date of loss, which the Panel finds is 2 August 1990, the date that KOC lost possession of the facility, plus the costs of removing the debris from the destroyed facility. The Panel finds that this measure of damage, rather than the future costs to repair Sea Island as used in the claim, is the appropriate measure, because KOC does not intend to repair Sea Island. The Panel therefore finds that KOC's claim for estimated future cost for the replacement of Sea Island should be decreased to US$66,228,328, which is the replacement cost of Sea Island on 2 August 1990 plus the costs of debris removal.

225. KOC estimates that the cost of debris removal from Sea Island would be US$15,180,000. The Panel finds that such costs are compensable as they are a direct consequence of Iraq's unlawful invasion and occupation of Kuwait. KOC estimates that debris removal would continue through 1996 and prices the operation using estimated 1996 prices. In fact, KOC has not removed the remaining structures from the site and has incorporated a portion thereof into the new loading system. Thus, any delay in debris removal is attributable to the claimant's decision to continue to use portions of the structure. The Panel finds that there is no basis for delay of the debris removal beyond 1994. Accordingly, the Panel estimates the costs of debris removal as of the end of 1994, the latest reasonable date for completion of the removal. Based on industry norm, the Panel's consultants calculate that the 1994 removal costs would have been US$12,000,000, and therefore finds that KOC's estimated cost of debris removal should be reduced to this amount.

226. KOC estimates the repair costs to the Small Boat Harbor to be US$2,510,000. Based on the review of the records and other evidence

submitted, the Panel concludes that KOC's estimates of the repair costs are justified.

227. After adjusting for lower estimates of costs, the Panel finds that KOC's estimated future costs for the reconstruction of the marine facilities, including debris removal from Sea Island should be US$80,738,328.

(c) Adjustments to future costs

(i) Depreciation

228. KOC proposes a deduction in the amount of US$49,678,432 to its claim for future estimated costs to account for accumulated depreciation where older facilities will be repaired or restored with newer equipment.

229. KOC uses a residual value of 15 per cent to calculate the depreciation for the Sea Island. The Panel finds however, based on information provided by its consultants, that five per cent is the industry norm for assets permanently fixed in offshore locations.

230. After adjusting for the lower residual value for the Sea Island Complex and the replacement cost for Sea Island, the Panel finds that a total depreciation deduction of US$46,359,830 should be made to the claim for future costs of the marine facilities.

231. In summary, the Panel recommends compensation for KOC's claim for the marine facilities in the amount of US$80,865,432, which is itemized in the following table:

Table 17. Marine facilities recommended compensation

Claim item/adjustment	Claim amount and deductions (US$)	Panel's adjustments to claimant amounts (US$)	Panel's recommended compensation (US$)
(a) Incurred costs	46,486,934		46,486,934
(b) Future costs	100,487,387	(19,749,059)	80,738,328
(c) Adjustments to future costs			
(i) Depreciation	(49,678,432)	3,318,602	(46,359,830)
Total	97,295,889	(16,430,457)	80,865,432

5. Ras-Al-Zoor

232. KOC requests compensation in the amount of US$77,634,000 for losses to physical assets at its Ras Al-Zoor gas processing facility, extra storage charges incurred for its offshore facility and looted engineering spares from its stores. Early in 1980, KOC undertook a project ("the Southern Gas Project") to utilize gases that were being flared and lost offshore from the Hout and Khafji fields in the Arabian Gulf.

233. In the Southern Gas Project, the flared gases were to be gathered and compressed at a new offshore compression platform ("Offshore Facility") and transmitted to a new acid gas removal and sulphur recovery plant at Ras-Al-Zoor ("Onshore Facility") through a submarine pipeline. On 23 February 1983, KOC contracted with Technip International AG ("Technip") to construct the Southern Gas Project facilities, onshore and offshore. Technip sub-contracted with Daewoo Shipbuilding and Heavy Machinery Limited ("Daewoo") to construct the Offshore Facility on 2 August 1983. The new Offshore Facility was to be linked to the existing offshore facility in the Arabian Gulf. The Southern Gas Project was due to be completed on 10 May 1985. Certain disputes delayed the completion of the project, however, and by 1988, only the Onshore Facility had been substantially completed. Disputes arose between Technip and Daewoo relating to their contract concerning the Offshore Facility. These disputes were submitted to arbitration in December 1987 and were resolved by a settlement agreement in September 1988 in which Daewoo agreed to enter directly into a contract with KOC on 24 September 1988 relating to the Offshore Facility.

234. During Iraq's unlawful invasion and occupation of Kuwait, KOC alleges that the Onshore Facility was almost totally destroyed by demolition blasts. KOC also alleges that a portion of the pipes purchased to construct the link with the Offshore Facility was stolen by the Iraqi forces. KOC states that a portion of the stolen pipes was subsequently retrieved and used in the firefighting effort in Kuwait following liberation. As a result, KOC alleges that this portion of the pipes could no longer be used as a gas transmission pipeline. KOC further states that the remainder of the stolen pipes was recovered and subsequently used in Wafra to link facilities as part of the reinstatement process.

235. Prior to Iraq's unlawful invasion and occupation of Kuwait, although the Offshore Facility had already been fabricated by Daewoo, KOC alleges that it was not transported and installed due to a lack of access to the offshore site in Saudi Arabia. The Offshore Facility remained in Daewoo's yard in Okpo, South Korea under an agreement that KOC would pay storage charges to Daewoo. KOC alleges that but for the invasion, the Offshore Facility would have been moved from South Korea to Kuwait by August/September 1991. KOC alleges that on 29 November 1989 it issued invitations to tender to load out the Offshore Facility and that

installation was expected to be completed in 1991. KOC asserts that prospective contractors' bids were submitted to Arabian Oil on behalf of the joint venture in May 1990, but that by June 1990, representatives of the Governments of Kuwait and Saudi Arabia in a Joint Executive Committee Meeting for the Southern Gas Project were still unable to agree on the bids. KOC states that there was a possibility of retendering and further discussion, but that by August 1990, Kuwait was invaded by Iraq and negotiations halted. KOC alleges that as a result of the delay caused by Iraq's unlawful invasion and occupation of Kuwait, KOC incurred additional storage charges for 31 months from August/September 1991 to March/April 1993 with respect to the Offshore Facility.

236. KOC also alleges that some engineering spare parts which were required for its Offshore Facility were looted from KOC's stores during the occupation.

237. Based on the evidence, the Panel finds that KOC's physical assets at Ras Al-Zoor have been damaged as alleged by KOC and that this damage is the direct result of Iraq's unlawful invasion and occupation of Kuwait.

238. This claim element is composed primarily of KOC's estimated reinstatement cost for the Onshore Facility. In addition, KOC requests compensation for the charges it incurred to store the Offshore Facility at the South Korean yards of the manufacturer beyond the expected delivery date. KOC also requests compensation for stocks of engineering spares that it claims were lost as a result of the invasion. KOC's calculations are shown in the following table:

Table 18. Ras Al-Zoor/Southern gas project claim amounts

Claim item/adjustment	Claim amount (US$)
(a) Onshore Facilities	58,445,000
(b) Offshore Facility storage charges	17,975,000
(c) Engineering spares	1,214,000
Total	77,634,000

(a) Onshore Facility

239. KOC requests compensation in the amount of US$58,445,000 for the reinstatement of the Onshore Facility. This amount includes a replacement cost of US$57,071,000, cost of debris removal of US$4,074,000, and a depreciation deduction of US$2,700,000 to account for certain assets related to the Onshore Facility which were replaced, such as the pier,

roads and drainage. KOC calculates this claim amount using the original construction costs, uplifted for inflation to prices in 1996, the date when KOC alleges it could have replaced the Onshore Facility. From this, KOC subtracts the value of certain items that were undamaged or were capable of salvage and adds an allowance for debris removal.

240. Iraq alleges that the Onshore Facility at Ras-Al-Zoor was actually destroyed by heavy bombardment by the USS MISSOURI (a warship of the United States Navy) and not by demolition blasts as claimed by KOC.

241. Although the Onshore Facility at Ras-Al-Zoor might have been destroyed by the USS MISSOURI as alleged by Iraq, the Panel finds that consistent with paragraph 21 (a) of Governing Council decision 7, Iraq's liability includes any direct loss, damage or injury suffered as a result of "[m]ilitary operations or threat of military action by either side during the period 2 August 1990 to 2 March 1991." (Emphasis added). Consequently, the Panel finds that, consistent with the Panel's decision in the WBC Claim, supra, paragraph 86, Iraq is liable for any direct loss, damage or injury whether caused by its own or by the coalition armed forces. Therefore, the Panel finds that it is irrelevant whether the Onshore Facility at Ras-Al-Zoor was damaged by Iraq or the coalition armed forces.

242. Iraq also disputes that the Onshore Facility was ever in operation, even though it was completed by 1988, due to a lack of access to the offshore site as mentioned in the KOC claim. Iraq also challenges the viability of the Southern Gas Project based on the sequence of events for the project construction and the eventual decision to cancel the project in 1996. For this reason, Iraq asserts that only the residual value of the Onshore Facility should be considered relevant for the valuation of this claim.

243. Based on the evidence and taking into account Iraq's arguments, the Panel finds that the Onshore Facility was damaged as described by KOC and has not been reinstated. The Panel also finds that KOC has abandoned its plans for the Southern Gas Project and has no intention of reinstating the Onshore Facility. Because the facility will not be reinstated, the Panel finds that the proper method of valuing KOC's loss in respect of this asset is the replacement cost on the date of loss, 2 August 1990, not the reinstatement cost in 1996.

244. KOC also makes no deduction for betterment or depreciation to the replacement cost of the Onshore Facility, arguing that because it was unused on 2 August 1990, no reductions for betterment or depreciation are warranted. The Onshore Facility, although unused, was already four years old on 2 August 1990. The Panel concludes that some allowance should be made to account for the deterioration the plant would have suffered from

its exposure to the elements and for the likely betterment that KOC would have achieved from technical enhancements available on the date of replacement. The Panel finds, therefore, that an allowance should be made for depreciation and betterment.

245. Based on the revised replacement date and the allowance of depreciation and betterment deductions, the Panel finds that the appropriate replacement cost for the Onshore Facility should be reduced from US$57,071,000 to US$37,030,805.

246. KOC's estimated cost of debris removal of US$4,074,000 makes no allowance for the scrap value of the Onshore Facility. Because the Onshore Facility was not operational at the time of the invasion, it had no contamination problems with which to contend. Thus, the Panel considers that much of the Onshore Facility could have been sold as scrap and finds, therefore, that KOC's cost of debris removal should be reduced to US$1,500,000 to account for the scrap value of the Onshore Facility.

247. KOC proposes a depreciation deduction of US$2,700,000 to account for accumulated depreciation from the date of the invasion to the replacement date on certain assets related to the Onshore Facility, such as the pier, roads and drainage. Because the Panel bases its loss calculation on the fact that KOC will not replace the Onshore Facility, these assets would have almost no value to KOC. Thus, the Panel finds that KOC's depreciation deduction should be decreased to US$50,000.

248. Based on the foregoing calculations, the Panel finds that US$38,480,805 is the appropriate level of compensation for this claim element.

(b) Offshore Facility storage charges

249. KOC also requests compensation in the amount of US$17,975,000 for storage charges paid to Daewoo for the Offshore Facility constructed by Daewoo and stored at its South Korean yards.

250. KOC calculates this claim element as 31 months of storage charges - the period from August 1991, when KOC claims it could have accepted delivery of the platform but for Iraq's unlawful invasion and occupation of Kuwait, to March 1994, the date KOC claims is the earliest it could have accepted delivery of the platform following liberation.

251. The Panel finds that KOC did incur storage charges in respect of the Offshore Facility and that the ultimate delivery of the platform would have occurred, if at all, later as a result of the invasion. The evidence suggests, however, that at least some of the delays in delivery of the platform are attributable to KOC's own decision ultimately to abandon the

Southern Gas Project. Using KOC's estimates of the time needed to arrange transportation and installation contracts for the platform, the Panel concludes that 14 months is the longest delay reasonably attributable to the effects of Iraq's unlawful invasion and occupation of Kuwait and finds that KOC's estimated storage charges should be decreased to US$8,050,000.

(c) Engineering spares

252. KOC requests compensation in the amount of US$1,214,000 for the loss of engineering spare parts stored at the Ras Al-Zoor complex for use in the Southern Gas Project. KOC calculates this amount as the acquisition cost of these spares, US$906,000, adjusted for inflation to the estimated replacement date of the Ras Al-Zoor Facility in 1996.

253. The Panel finds, however, that the replacement date of the Ras Al-Zoor facility has no bearing on the date on which the spares could have been replaced. Accordingly, the Panel estimates that the replacement cost for the engineering spares on 2 August 1990 would have been US$1,034,380, and finds, therefore, that KOC's estimates for the cost of its engineering spare parts should be decreased to this amount.

254. In summary, the Panel recommends for KOC's claim for the Ras Al-Zoor facility in the amount of US$47,565,185, which is itemized in the following table:

Table 19. Ras Al-Zoor/Southern gas project recommended compensation

Claim item/adjustment	Claim amounts (US$)	Panel's adjustments to claim amounts (US$)	Panel's recommended compensation (US$)
(a) Onshore Facility	58,445,000	(19,964,195)	38,480,805
(b) Offshore Facility storage charges	17,975,000	(9,925,000)	8,050,000
(c) Engineering spares	1,214,000	(179,620)	1,034,380
Total	77,634,000	(30,068,815)	47,565,185

6. Projects under construction/consideration

255. KOC requests compensation in the amount of US$66,652,479 for damage to physical assets related to its projects under construction or consideration. At the time of the invasion, KOC states that it was pursuing a number of projects, including projects of building a gas

pipeline and installing desalters. KOC alleges that each of these projects was delayed or interrupted by Iraq's unlawful invasion and occupation of Kuwait when Iraqi forces took control of all of KOC's facilities. KOC also alleges that during this period, the construction materials for one of its projects were looted by Iraqi forces. KOC further alleges that it will incur increased costs to resume these projects.

256. Prior to 2 August 1990, KOC started a project to construct a 12-inch gas transmission pipeline ("the Gas line project") to transport all acid/sour gas from K-NEW in West Kuwait to the Kuwait National Petroleum Company acid recovery plant at Shuaiba. Work had commenced on 16 December 1989 and as of 2 August 1990, the Gas line project was 59 per cent complete, the materials had been issued to the project and a substantial amount of money had been paid by KOC to the contractor.

257. Prior to 2 August 1990, KOC asserts that it had planned the Desalter Phase IV project to equip the gathering centres, which involved the design, supply, construction and commissioning of a twin train dehydration and desalting plant, the installation of a new control room and the construction of flowlines. KOC further asserts that prior to 2 August 1990, invitations to tender had been issued, a pre-tender meeting had taken place on 15 July 1990 and bids were due by 16 September 1990. KOC alleges that the Desalter Phase IV project would have been completed by 31 December 1992 but for Iraq's unlawful invasion and occupation of Kuwait.

258. KOC provides an affidavit that describes KOC's expenses that were incurred on the Gas line project and the budget to which KOC had committed for the Desalter Phase IV project. In support of the statement, KOC produces relevant contracts for the projects and other internal documentation such as revisions of authorizations for expenditures. The damage sustained by the facilities under construction is described in KOC's consultants' reports and an affidavit.

259. Based on the evidence, the Panel finds that KOC's physical assets for use in the Gas line project were removed by Iraqi forces, that the Gas line project was delayed as alleged by KOC and that this damage is the direct result of Iraq's unlawful invasion and occupation of Kuwait.

260. This claim element is composed of (a) a claim for loss of materials, cost of reworking and price escalation for remaining work on the Gas line project and (b), the cost of completing the Desalter Phase IV project.

Table 20. Projects under construction/consideration claim amounts

Claim item/adjustment	Claim amount (US$)
(a) Gas line project	1,510,239
(b) Desalter Phase IV project	65,142,240
Total	66,652,479

(a) Gas line project

261. KOC requests compensation in the amount of US$1,510,239 for the Gas line project. KOC claims that materials worth US$968,000 issued for the project were stolen and that, applying a price escalation of 12 per cent it incurred a loss of US$1,084,160. Based on contract bids, KOC also claims US$264,155 for reworking costs. Based on price differences between the original contract prior to the invasion and quotations received after liberation, KOC claims US$161,914 for increased costs for completing the remaining works.

262. Iraq alleges that the original cost of materials is not ascertained by a neutral party and that KOC's inaction and lack of decision contributed to the period of delay on which the escalation factor is based. Iraq also argues that KOC's claim for reworking cost is not supported by evidence.

263. Based on the evidence, the Panel finds that the contract for the installation of the gas transmission line was operational prior to Iraq's unlawful invasion and occupation of Kuwait. The Panel also finds that based on industry standards, the original cost of materials is reasonable. The Panel further finds that the period of delay was justified under the circumstances in which KOC had to resume its operations and prioritise certain vital operations over others. In addition, the Panel finds that there was sufficient evidence to demonstrate that the contract was activated with additional expenditure called "reworking cost" as described in KOC's claim. The Panel finds, therefore, that KOC's claim for US$1,510,239 for the Gas line project is justified.

(b) Desalter Phase IV project

264. KOC requests compensation in the amount of US$65,142,240 for financial losses incurred as a result of delays in completing the Desalter Phase IV project and general price escalations resulting from the delays. KOC estimated the cost of this project to be US$171,500,100 based on the actual costs incurred on a similar project with adjustments for scope of the projected work. The contract for the Desalter Phase IV project was

awarded in November 1992 for US$236,642,340 and KOC claims for the increased cost to complete it.

265. Iraq contends that KOC's claim for the Desalter Phase IV project is not supported by evidence and that the alleged losses are indirect since the project was still in the planning stage during the relevant period.

266. Based on the evidence and taking into account Iraq's arguments, it was clear to the Panel that on 2 August 1990, the project was still in its planning phase, as bids had not yet been received from invited parties for the project and KOC had not committed itself to any expense or liability towards a third party. Accordingly, the Panel agrees with Iraq and finds that KOC has not suffered a loss on this project that directly resulted from Iraq's unlawful invasion and occupation of Kuwait. For this reason, the Panel does not recommend compensation for KOC's claim concerning the Desalter Phase IV project.

267. In summary, the Panel recommends compensation for KOC's claim for projects under construction or consideration claim element in the amount of US$1,510,239, which is itemized in the following table:

Table 21. Projects under construction/consideration recommended compensation

Claim item/adjustment	Claim amounts (US$)	Panel's adjustments to claim amounts (US$)	Panel's recommended compensation (US$)
(a) Gas line project	1,510,239	0	1,510,239
(b) Desalter Phase IV project	65,142,240	(65,142,240)	0
Total	66,652,479	(65,142,240)	1,510,239

7. Well Blowout Control programme and other physical assets

268. KOC requests compensation in the amount of US$407,548,924 consisting of US$70,930,634 for losses to other physical assets and US$336,618,290 for costs related to its Well Blowout Control ("WBC") programme, Al-Awda.

269. KOC's other physical assets include marine craft, heavy plant vehicles, machinery and equipment, vehicles, furniture, documents, stocks and spares (such as oil well casing, tubing, pumps, compressors and turbines). KOC alleges that these assets were stolen, damaged and neglected during the invasion and occupation of Kuwait. KOC also alleges

that some of its marine craft were damaged by explosions and missiles in military activities during the occupation. The amount claimed for KOC's other physical assets is made up of the replacement costs of these assets, with the exception of certain marine craft and heavy plant vehicles.

270. The WBC costs include capital expenditures, freight charges and sundries/consulting costs that were transferred from the WBC Claim to the present claim.

271. In relation to the WBC claim, KOC subtracts amounts it calls "adjustments" to account for residual values of certain physical assets that it had used in its reconstruction works.

272. Iraq contends that the residual value of assets purchased in connection with the WBC claim was incorrectly included in KOC's other physical assets claim element.

273. Taking into account the structure of KOC's claim and Iraq's argument, the Panel finds that the residual values of assets purchased in connection with the WBC claim and the well blowout control costs should be considered together within one claim element and therefore, groups these items within the present claim element.

274. KOC's calculations are shown in the following table:

Table 22. WBC costs and other physical assets claim amounts

Claim item/adjustment	Claimant's adjustments (US$)	Claim amount (US$)
(a) Well blowout control costs		336,618,290
(b) Other physical assets		118,631,260
(c) Residual value adjustments		
(i) Heavy plant vehicles and other assets	(38,761,169)	(38,761,169)
(ii) Modular buildings	(8,939,457)	(8,939,457)
Total	(47,700,626)	407,548,924

(a) Well blowout control costs

275. KOC planned the restoration of its facilities before the liberation of Kuwait. Three phases of the restoration programme were implemented by KOC: Al Awda, Al Tameer and Phase III. The Al Awda phase of the reconstruction effort focused on well blowout control operations and

supporting firefighters' access to the wells and clearing ordnance. The last of the burning wells was capped in November 1991. This phase also aimed to restore production as quickly as possible to a level sufficient to meet Kuwait's domestic oil requirements and to end the need to import oil from abroad.

276. KOC submitted a separate claim to the Commission for US$950,715,662 for the expenses incurred in its well blowout control efforts (this claim is referred to as the WBC claim in paragraph 82, supra). In the report on the WBC claim, the Panel recommended that KOC receive compensation in the amount of US$610,048,547 in respect of that claim but declared that US$337,612,725 of the WBC claim amount should be transferred and considered under KOC's other categories of claim. As a result, KOC amended its present physical assets claim to reflect the Panel's recommended distribution of claim elements. The majority of the transferred amount appears in the present claim as capital expenditures, freight charges and sundries/consulting costs amounting to US$336,618,290. The remaining US$994,435 of the transferred amount was characterized as costs directly relating to a separate claim by KOC, the Removal of Unexploded Ordnance and Environmental Damage Claim, and will accordingly be considered by the Commission in that connection.

277. In the report on the WBC claim, the Panel determined that the claim for capital expenditure is subject to adjustment for residual value of tangible assets used during the well blowout control operations and other restoration projects which have since been retained by KOC as assets operating in the business. An adjustment for such contingency is reflected in this claim element. Because of the situation prevailing in Kuwait immediately after the liberation, the claimant's records do not permit it to specify the phase of the reconstruction project to which the cost of a particular tangible asset should be allocated. As a result, the adjustments discussed under the heading "residual value adjustments" (see paragraphs 289-292, infra) include the adjustments for those assets whose costs were included in the WBC claim as well as for those assets whose costs are included in the "other physical assets" claim (see paragraphs 281-288, infra). Because the adjustments are dealt with elsewhere, the Panel has assessed and verified the costs of this claim element on a strictly gross basis.

278. KOC allocated 100 per cent of its sundry/consulting costs to the physical assets claim. In the WBC claim, the Panel had recommended allocation of these costs across KOC's present physical assets claim and the Removal of Unexploded Ordnance and Fnvironmental Damage Claim. After review of the evidence in support of the present claim, however, the Panel is satisfied that KOC has demonstrated that the vast majority of these costs are related to KOC's physical assets and less than one per cent of the costs are related to KOC's other claims. For this reason the Panel finds that the sundry/consulting costs are correctly allocated in this claim.

279. KOC provides evidence concerning the preparations for and implementation of Al-Awda in a number of affidavits that were submitted in support of the WBC claim. In addition, KOC provides contracts with Bechtel which outline the scope of Bechtel's responsibilities. In this connection, the Panel examined the evidence of costs incurred in this claim element by using the verification procedures employed in the WBC claim.

280. Based on their review of the records and other evidence submitted, the Panel concludes that the claim amount for the WBC claim element has been transferred from the WBC claim as directed and considers the amount claimed to be justified. The Panel finds therefore, that KOC costs related to its WBC programme, Al Awda are US$336,618,290.

(b) Other physical assets

281. KOC requests compensation in the amount of US$118,631,260 for the replacement costs of its other physical assets.

282. Iraq alleges that KOC has not tried to ascertain whether the assets were indeed damaged or who was actually responsible for the damage and loss. Iraq also alleges that the relevant inventories were not submitted by KOC, that there are inadequate details on each asset such as its job number, location, repair information and condition. Iraq further argues that replacement estimates that are based on assumptions are not permissible.

283. Based on the evidence, the Panel finds that the assets itemized in KOC's other physical assets claim were in its possession on 2 August 1990 and have been stolen or damaged as alleged by KOC. The Panel further finds that this loss is the direct result of Iraq's unlawful invasion and occupation of Kuwait.

284. KOC uses a residual value of 10 per cent, amounting to US$18,638,528, to calculate depreciation for KOC's machinery and equipment. The Panel finds, however, based on information provided by its consultants, that five per cent is the industry norm for the machinery and equipment at issue. The Panel finds, therefore, that KOC's residual value for its machinery and equipment should be reduced by the amount of US$3,524,291 to US$15,114,237.

285. KOC uses a residual value of 20 per cent, amounting to US$8,278,865, to calculate depreciation for its trucks. The Panel finds, however, based on information provided by its consultants, that a 10 per cent residual value is the industry norm for the trucks at issue. The Panel finds, therefore, that KOC's residual value for its trucks should be reduced by the amount of US$2,760,319 to US$5,518,546.

286. KOC requests compensation in the amount of US$10,078,662 for the replacement and repair costs of its marine craft. The Panel's consultants were of the opinion that based on industry practice, KOC's claim for marine crafts should be based on their insured value rather than their replacement cost. The Panel therefore concluded that KOC's methodology of deducting damage allowances was acceptable, if the deductions were made from the insurance value of the marine crafts rather than their replacement costs. The Panel finds that the repair costs for the marine craft were actually incurred and justified, based on the invoices produced by KOC. After adjustments are made based on the insurance value of the marine craft and deductions are made for damage allowances and sale proceeds, the Panel finds that KOC's replacement and repair costs of its marine craft should be reduced by the amount of US$450,014 to US$9,628,648.

287. KOC requests compensation in the amount of US$73,405,656 for the replacement costs of its stocks and spares. Based on the evidence, the Panel finds that the replacement costs of KOC's stocks and spares are justified. The evidence supports a value of US$61,556,868 for KOC's stocks and spares and the Panel concludes that the six per cent price escalation and a two per cent normal inventory reduction applied by KOC are reasonable. The Panel did not, however, make any adjustments either for unrecorded receipts of material prior to Iraq's unlawful invasion and occupation of Kuwait or for items written off and later found, as these could not be verified. Taking into account the adjustments discussed above, the Panel finds that KOC's replacement costs of its stocks and spares should be reduced by the amount of US$12,210,455 to US$61,195,201.

288. The Panel finds, therefore, that the total of KOC's replacement costs for its other physical assets should be reduced by the aggregate amount of US$18,945,079 to US$99,686,181.

(c) Residual values

289. These residual values relate to the assets that were acquired by KOC for the WBC claim project and the reconstruction phases that followed, referred to by KOC as Al Awda and Al Tameer respectively. The capital costs for these assets were included in the report on the WBC claim. Further to instructions by the Panel, in this claim KOC made deductions for residual values as KOC still possessed these capital assets after the completion of these projects and had the ability to sell these assets. Capital assets were also acquired by KOC after the period of the report on the WBC claim and KOC made further deductions for the residual values of these assets.

(i) Heavy plant vehicles and other assets

290. KOC proposes an overall deduction to its claim for the residual value of its heavy plant vehicles and other assets in the amount of

US$38,761,169. The Panel agrees that the cost of assets and deductions for assets obtained as a direct replacement for KOC's lost assets is justified. KOC applied a composite market factor of 38 per cent to all the assets to reflect the costs of disposal and the circumstances which KOC was facing at the time. The Panel considers that further deductions to allow for the locations and quantities of the assets should be made. Based on this reasoning, the Panel applies a modified factor of 28 per cent. Taking into account the adjustments discussed above, the Panel finds that a deduction of US$60,295,152 should be made for the residual value of KOC's heavy plant vehicles and other assets.

(ii) Modular buildings

291. KOC proposes a deduction in the amount of US$8,939,457 for the residual value of it modular buildings. Based on its review of the records and other evidence submitted, the Panel concludes that the deduction for the residual value of the modular buildings was justified and finds, therefore, that KOC's residual value deduction for its modular buildings is US$8,939,457.

292. In summary, the Panel recommends compensation for KOC's claim for well blowout control costs and other physical assets in the amount of US$367,069,862, which is itemized in the following table:

Table 23. WBC costs and other physical assets recommended compensation

Claim item/adjustment	Claim amount and deductions (US$)	Panel's adjustments to claimant amounts (US$)	Panel's recommended compensation (US$)
(a) Well blowout control costs	336,618,290	0	336,618,290
(b) Other physical assets	118,631,260	(18,945,079)	99,686,181
(c) Residual value adjustments			
(i) Heavy plant, vehicles, and other assets	(38,761,169)	(21,533,983)	(60,295,152)
(ii) Modular buildings	(8,939,457)	0	(8,939,457)
Total	407,548,924	(40,479,062)	367,069,862

8. Post Well Capping - Al Tameer

293. KOC requests compensation in the amount of US$202,161,869 for its costs related to its well post capping programme, Al Tameer. When the Al Awda project was completed in November 1991, the project was renamed Al

Tameer. The Al Tameer project focused on reconstructing KOC's operational networks to achieve pre-invasion production levels. This involved workover operations and drilling new wells; repairs and rehabilitation of damaged gathering centres, desalters and gas booster stations, as well as buildings and utilities in the oil fields; and the reconstruction of Ahmadi Township and of oil networks. By March 1993, post-capping work on 779 wells was complete. The Al Tameer project ended in June 1993.

294. KOC provides in an affidavit a detailed description of work done during the Al Tameer project. KOC also provides its consultant's assessment of well post capping costs based on figures in KOC's general ledger, job cost summaries and a well workover cost system. Well post capping costs were given specific general ledger account numbers and job cost numbers, which were included in the WBC claim. Well workover costs relating to KOC's post capping costs were recorded in KOC's well workover job cost system, which contained a unique job number for each well.

295. KOC's consultants identified post capping costs by reviewing documents relating to KOC's general ledger and job numbers to ensure that costs were properly allocated. KOC also proposed adjustments to reflect double counting and a contract dispute. Based on this review, KOC deducted US$25,654,763 which it considered to be part of well blowout control costs, from a total of US$58,757,992 of its incurred costs for this claim element resulting in a claim for well post capping costs of US$33,103,229.

296. KOC's consultants identified well workover costs by comparing the well workover costs in the well workover job cost system and well workover costs in KOC's Drilling Register Report, which contains data on incurred workover costs for each well as a result of post well capping operations. KOC's consultants deducted KOC salaries from these costs, resulting in the amount of US$169,058,640.

297. Based on their review and other evidence submitted, the Panel concludes that the approach of KOC's consultants in preparing the claim and the deductions made by KOC were reasonable. The Panel also considers that there should be no deductions for betterment or depreciation as these costs related to temporary works and therefore did not extend the life of existing assets. The Panel finds, therefore, that KOC's costs for the Al Tameer project is US$202,161,869.

298. In summary, the Panel recommends compensation for KOC's claim for its post well capping programme known as the Al Tameer project in the amount of US$202,161,869.

9. Phase III

299. KOC requests compensation in the amount of US$54,904,490 for restoration costs related to its Phase III programme. The Phase III was a

restoration programme that began in July 1993. The programme is supposed to continue until the completion of KOC's restoration work. The restoration work was no longer being undertaken on an emergency basis in this phase. KOC claims for the project management costs associated with restoration works which have been incurred since the end of the Al-Tameer project plus the related future costs to complete the restoration.

300. KOC provides an affidavit that describes the project management work done in Phase III by another consultancy, Ralph M. Parsons ("Parsons"), which took over from Bechtel in June 1993. KOC also provides a supplemental assessment by its consultants to show that Parsons was also responsible for project management of restoration work up to October 1996. KOC also relies on this assessment as evidence of costs. In addition, KOC provides a copy of its contract with Parson describing the scope of Parson's responsibilities.

301. KOC's consultants analyzed costs incurred with Parsons from the inception of the contract in October 1993 to July 1994, the point at which KOC's physical loss assessment was made. These costs were then projected to the end of the contract in 1996. KOC's consultants made a deduction of 10 per cent from the total to reflect elements of Parson's work which might not relate to restoration projects during the term of the contract, reducing the estimated total cost of US$61,004,988 to US$54,904,490.

302. Based on the evidence, the Panel concludes that Parson's services were required to complete the restoration work and were essential, given KOC's small in-house project management capability. The Panel compared Parson's fees to KOC's overall estimated future works outstanding as at 1994, reported by KOC's consultants to be US$529,575,596. Based on this comparison, the Panel considers that Parson's fees, which amounted to 12 per cent of KOC's overall estimated future works, were justified. The Panel also considered that a 10 per cent deduction for non-restoration fee work was justified. The Panel finds, therefore, that KOC's costs for Phase III are US$54,904,490.

303. In summary, the Panel recommends compensation for KOC's claim for restoration costs related to its Phase III programme in the amount of US$54,904,490.

10. Reconstruction of the Magwa road/replacement of crude line no. 5

304. KOC requests compensation in the amount of US$932,070 for damage allegedly incurred on a 10 kilometre road, the Magwa road, that runs from the north of Ahmadi Township to a public road network.

305. KOC also requests compensation in the amount of US$1,630,031 for a portion of the costs associated with replacing a transit line which ran between two manifolds, referred to as crude line no. 5.

306. KOC submitted the Magwa road and replacement of crude line no. 5 claims six months after the one year period of review had begun. Based on the nature of these claims and the circumstance in which they were submitted, the Panel finds that the required claim review and physical verification of these claims were not possible if the claims review process were to proceed and be completed in a comprehensive manner within the stipulated time. The Panel finds therefore that introducing these claims as part of KOC's Claim at such a late stage would disrupt and be detrimental to the Panel's one-year claims review process. As a result, the Panel finds that KOC's claims for the Magwa road and replacement of crude line no. 5 are not timely filed, and the Panel will not consider them as supplements to KOC's Claim.

307. In summary, the Panel recommends no compensation for the reconstruction of Magwa road and replacement of crude line no. 5 claim elements.

11. Summary of recommendation

308. The Panel recommends total compensation be awarded to KOC in the amount of US$2,216,550,792 as itemized in the following table:

Table 24. Summary - Kuwait Oil Company recommended compensation

Claim element	Claim amounts (US$)	Panel's recommended compensation (US$)
1. Oil fields:		
(a) South East oil fields	829,245,481	781,560,833
(b) West oil fields	190,643,380	165,227,583
(c) North oil fields	359,789,088	318,162,942
(d) Wafra oil fields	52,854,617	40,038,401
2. Ahmadi Township	23,574,096	17,356,118
3. North and South tank farms	148,029,763	140,127,838
4. Marine facilities	97,295,889	80,865,432
5. Ras Al Zoor - Gas facility	77,634,000	47,565,185
6. Projects under construction/ consideration	66,652,479	1,510,239
7. Well blowout control - Al Awda & other physical assets	407,548,924	367,069,862
8. Post well capping - Al Tameer	202,161,869	202,161,869
9. Phase III	54,904,490	54,904,490
10. Reconstruction of the Magwa Road/	932,070	0
Replacement of crude line no.5	1,630,031	0
Total	2,512,896,177	2,216,550,792

VI. CLAIM OF KUWAIT PETROLEUM CORPORATION (CLAIM NO: 4003198)

A. Nature of claim

1. Facts and contentions

309. Kuwait Petroleum Corporation ("KPC") is owned by the State of Kuwait ("Kuwait"), and acts as a holding company for all Kuwaiti petroleum and petrochemical sector companies operating in Kuwait and abroad. KPC also markets and sells crude oil and petroleum products. KPC operates mainly through its two wholly-owned subsidiaries Kuwait Oil Company ("KOC") and Kuwait National Petroleum Corporation ("KNPC"). The structure of the Kuwaiti oil industry and the roles of KPC, KOC and KNPC within it are explained in more detail in paragraphs 77-78, supra. KPC pays Kuwait's Ministry of Oil for the crude oil and products produced by KOC and KNPC and subsequently markets and sells the crude oil and products. Ownership of Kuwait's crude oil passes to KPC by way of sale. KPC pays a Transfer Price agreed between KPC and the Kuwait Ministry of Oil. The Transfer Price is supposed to reflect international market levels, but it is adjusted for costs of production, transportation and export. KPC retains the profits realized from the sale proceeds. KPC's claim is submitted as a category "E" (corporate) claim as it claims in the capacity of a public sector enterprise and not as a government, as discussed in para. 99, supra.

310. KPC claims that from 2 August 1990, Iraq took control of its oil facilities and denied the Kuwaitis access to them. KPC alleges that its stock of crude oil at KOC premises and its stock of crude oil and refined products at KNPC premises declined and were lost during the occupation. KPC also claims that one part of a cargo of sulphur that KPC had sold to Moroccan buyers was seized by the Iraqi military during the invasion. KPC further claims that its head office, staff accommodation and related facilities in Kuwait City were damaged and looted by the Iraqi forces during the occupation.

311. KPC requests compensation in the amount of US$124,396,824 for the stock losses of petroleum and petroleum products, the loss of the sulphur cargo and the damages to its offices and related facilities.

2. Claim presented

312. KPC's claim is presented in four elements as shown in the following table. Amounts shown have been converted to United States dollars. Details of the claim elements are presented in the sections that follow:

Table 25. Kuwait Petroleum Corporation claim amounts

Claim elements	Claim amount (US$)
1. Stock at KOC premises	71,200,000
2. Stock at KNPC premises	51,924,000
3. Sulphur contract	584,824
4. Fixed assets	688,000
Total	124,396,824

(a) Evidence presented in support

313. KPC's evidence of its loss is contained in contemporaneous documents such as oil accounts, printouts of stock measurements, financial statements, contracts and correspondence. In support of its assertions that Iraqi forces were responsible for this loss, KPC submitted numerous affidavits. Further support is offered by KPC's consultant's reports which contain evidence describing KPC's facilities and assessments and quantification of losses incurred by KPC.

(b) Iraq's response

314. Iraq alleges that there is a lack of substantial and direct evidence of Iraq's responsibility and of the loss claimed by KPC.

315. Iraq also alleges that KPC did not incur stock losses because during the relevant period, Iraq and Kuwait jointly operated Kuwait's oil installations in the manner of a technical cooperation. Iraq asserts that since there was a continuity of operations, KPC stock values were constantly changing.

316. Based on the evidence, the Panel finds that KPC's loss was incurred as alleged by KPC and that this loss is the direct result of Iraq's unlawful invasion and occupation of Kuwait.

317. The Panel finds that the evidence indicates that Iraqi forces dispossessed Kuwait, KPC and KPC's subsidiaries of the oil fields and facilities and that Iraq and Kuwait did not "jointly operate" Kuwait's oil fields' facilities. The Panel has previously addressed the issue of Iraq's liability (see para. 18-22, 113, supra.). The Panel finds, therefore, that any fluctuations in stock levels after Iraq took possession of KPC's

facilities are Iraq's responsibility and that Iraq should be liable to compensate KPC to the extent that KPC could demonstrate that there was a decline in its stock levels during the relevant period.

B. Analysis of the claim

1. The stock at KOC premises

318. KPC requests compensation in the amount of US$71,200,000 for the loss of its petroleum stock at KOC premises.

319. In an affidavit in support of this claim element, KPC provides a description of how the stock of crude oil at KOC premises is measured and recorded. Each time there is a movement of crude oil out of a tank to a refinery or the export terminal, measurements are taken by reading a calibrated meter on the side of the tank to determine the volume of crude. This measurement is checked from the control room at the tank farm. If crude is to be exported, the stock is further measured by "dipping" i.e. by physically inserting a hand gauge into a tank through a dip hatch to measure the volume of crude oil. The figures obtained then will be incorporated in KOC's crude oil accounting schedules prepared by the Oil and Gas Accounting Division and published monthly. These records include stock volumes in tanks and pipelines.

320. KPC provides KOC's crude oil accounting records as evidence of the volume of crude oil in KOC's premises. These records are maintained by KOC of quantities held at tank farms and pipelines until the point at which ownership passes to KPC, either at the refinery or the export terminal.

321. KPC relies on its consultant's assessment of its stock value based on oil prices at the time the loss occurred. Relevant documentation on oil prices are submitted as evidence.

322. KPC's claim for stock lost from KOC's premises includes a claim for US$67,620,000 for oil lost from the tanks at KOC and US$3,580,000 for oil lost from the KOC pipelines. As support for this claim, KPC submitted a report prepared by its accountants. This report summarizes the information given to the accountants by KPC and uses this information to estimate that KPC lost 4,942,000 barrels of crude oil from tanks at KOC's North and South Tank Farms and from the tanks located at Wafra. KPC's accountants use the same methods to estimate that KPC lost 271,000 barrels of oil from pipelines.

323. KPC values the lost crude oil using estimated prices calculated by its consultants. These prices are based on KPC's historical sales proceeds in the six months prior to 30 June 1990 and range from US$10.00 to US$13.78 per barrel, depending on the grade of the oil. The Panel finds that the

prices employed to value the oil lost from the tanks and pipelines were reasonable and supported by historical evidence of KPC's sales.

324. Verification of the claim for loss of stock was initially complicated by the claimant's failure to submit primary evidence of the stock losses. As noted, KPC relies primarily on the report prepared by its accountants. During the investigation of the claim, however, KPC's accountants revealed that they had not independently verified some of the figures and had instead relied on data supplied in summary form by KPC. As a result, the Panel instructed the secretariat and its consultants to undertake an independent verification of the claim for stock using primary evidence such as contemporaneous stock measurement records. Based on this investigation, the Panel's consultants concluded that the claim for stock lost from KOC's premises was incorrectly stated in some areas.

325. First, KPC's accountants based the amount of the claim for stock in tanks on the difference between stock in the tanks on 31 July 1990 and on 31 May 1991, the first day after liberation when measurement was possible. In fact, actual records of stock measurements were available from 5.30 a.m. on 2 August 1990, immediately prior to the invasion. These records disclose that there were additional movements of oil through the tanks in question after the 31 July measurement. The net effect of these movements was that the amount of oil in the tanks on 2 August was 162,000 barrels less than the volume present on 31 July. The Panel finds that the claim should be reduced by the amount claimed for these 162,000 barrels, or US$3,232,360.

326. Second, as with tanks, pipelines need a minimum quantity of oil present at all times to permit movement through the lines. The claim for this oil in the pipelines, sometimes termed "pipefill", is similarly unsupported by primary evidence. KPC's accountants base their valuation opinion on information provided to them by KPC in summary form. KPC's accountants make reference to an "assessment" of pipefill; however, no such assessment appears in the accountant's working papers or in KPC's or KOC's records. Moreover, during the verification programme, KPC was unable to supply any records to substantiate the loss of pipefill. The Panel directed its consultants to attempt to verify the loss by measuring the damage to the pipelines, from which the loss of oil from the damaged pipes could be calculated. Again, KPC could not produce any evidence to demonstrate that the pipelines had been damaged sufficiently to cause a loss of pipefill. Because the evidence presented to support this claim is not sufficient to demonstrate the claimed loss, the Panel finds that the loss of stock claim should be reduced by the amount of US$3,580,000 claimed for the pipefill.

327. Based on the foregoing findings, the Panel calculates that the claim for loss of stock at KOC's premises should be reduced by US$5,812,360.

328. The Panel finds, therefore, that KOC's claim for the loss of stock at KOC's premises is justified in the amount of US$65,387,640 and recommends compensation in this amount.

2. The stock at KNPC premises

329. KPC requests compensation in the amount of US$51,924,000 for the loss of its petroleum and petroleum product stock at KNPC premises. KPC alleges that 1300 metric tonnes of crude oil and 222,600 metric tonnes of refined products belonging to KPC, stored at KNPC premises, were lost during the occupation.

330. KPC produces affidavits explaining the procedures for taking measurements of the stock of crude oil at each of the KNPC refineries:

(a) Mina Al-Ahmadi refinery: A computerized daily stock report is prepared from readings taken at 7.00 a.m. each day by means of a display available in the computer room showing the gauges on the tank side meters for each tank. The refinery issues an Oil Account Report each month, reflecting information from various sources, including hand dipping of static tanks and movement log sheets. The last daily stock printout available prior to the invasion shows stock levels at 7.00 a.m on 2 August 1990. After the liberation of Kuwait, a physical stock take was carried out and a stock printout dated 26 February 1991 was compiled.

(b) Mina Abdulla refinery: The meter measurements of all crude and product tanks are taken at 6.00 a.m. each day and tanks were also measured before and after movements. A daily computer printout is compiled from the measurements. The last printout before the invasion was prepared on 1 August 1990, incorporating details of tank stocks as at 6.00 a.m. that day. This printout was updated and brought forward to 6.00 a.m. on 2 August 1990 by reference to information available to KNPC about production levels and known movements at the refinery on 2 August 1990. After the liberation of Kuwait, a physical stocktake was carried out and a printout dated 1 April 1991 was compiled.

(c) Shuaiba refinery: Prior to the invasion, daily readings for each crude and product storage tank were taken at 5.00 a.m., using tankside gauge information from the control room. The information was then produced in the form of a daily tank inventory. Hand gauge readings of the tanks were taken at monthly intervals for reconciliation and when products were being delivered to a vessel or to another refinery. The last tank inventory available before the invasion was dated 1 August 1990 and recorded measurements taken at 5.00 a.m. on 31 July and 1 August 1990. After the liberation of Kuwait, a physical stock take was carried out and a printout dated 28 February 1991 was compiled.

331. KPC produces copies of stock printouts as evidence of lost stock. KPC alleges that KNPC's stock printouts show the decline in the volume of crude oil and products due to the invasion. The volume of crude oil at the KNPC refineries declined from 133,200 metric tonnes to 131,900 metric tonnes. The volume of the refined products at the KNPC refineries declined from 2,828,600 metric tonnes to 2,606,000 metric tonnes.

332. KPC relies on its consultant's assessment of its stock value based on oil prices at the time the loss occurred. Relevant documentation on oil prices are submitted as evidence.

333. KPC's claim for stock lost at KNPC's premises includes claims for the value of crude oil and products allegedly lost from stores located at the Mina Al-Ahmadi refinery (US$28,518,000) and the Shuaiba refinery (US$25,915,000). KPC also notes that additional refined oil products were collected at the Mina Abdulla refinery after the 2 August 1990 but before the cessation of operations. KPC reduces the claim by the value of these additions to the stocks at Mina Abdulla (US$2,509,000).

334. As support for this claim, KPC submitted a report prepared by its accountants. In addition, KPC has given the Commission access to detailed contemporaneous stock records from each of the refineries. Based on their review of these records, the Panel concludes that KPC accurately recorded the stock levels at the refineries and that the amounts claimed are supported by this evidence. The Panel finds therefore that KPC has accurately stated the amount of stock lost from the KNPC refineries.

335. As [illegible]ed in para. 322, supra, the price estimates relied on by KPC [illegible]ble and supported by evidence of KPC's historical sales price[illegible]

336. The Panel recommends compensation for KOC's claim for the loss of stock at KNPC premises in the amount of US$51,924,000.

337. In summary, the Panel concludes that KPC's claim for stock losses of petroleum and petroleum products at the premises of KOC and KNPC should be reduced from US$123,124,000 to the amount of US$117,311,640.

338. Iraq alleges, however, that the insurance premium refund received by KPC for the oil stock raises doubt on the claim and was not considered in reducing the amount of the claim. Based on the evidence, the Panel finds that the refund of insurance premiums received by KPC was for the insurance coverage of its capital and non-capital assets for the period from 2 August 1990 to 30 November 1990 amounting to KD1,049,279.993 or US$3,630,727.[19] The Panel considers it appropriate that this amount should be deducted from KPC's claim as cost savings that KPC have made both on its capital and non-capital assets. The Panel finds, therefore, that KPC's claim should be

reduced by this amount to a total of US$113,680,913, and recommends this amount as compensation for the claims for oil stocks held at the KOC and KNPC premises.

3. The sulphur contract

339. KPC requests compensation in the amount of US$584,824 for a cargo of sulphur lost during the occupation. KPC alleges that a vessel, the Sea Music II, was at the docks of the Shuaiba refinery on 2 August 1990 and was partly loaded with a cargo of sulphur. The sulphur had been sold to a Moroccan company and was being loaded for delivery. Following the liberation of Kuwait, KPC discovered that the vessel and the cargo of sulphur had been removed during the occupation. KPC alleges that the sulphur cargo loaded on the ship was seized by the Iraqi forces. The Moroccan company, Maroc-Phospore had established a letter of credit for the full value of the sulphur shipment described above. The letter of credit is payable upon the presentation of KPC's commercial invoice and a full set of original shipping documents. KPC alleges that because no shipping documents were prepared, these documents were not presented. As a result, no payments were made. On 31 December 1991, KPC issued an invoice in the sum of US$584,824 to Maroc-Phosphore relating to 7,132 metric tonnes of sulphur that had been loaded on the Sea Music II and priced at US$82 per metric tonne. This was returned by Maroc-Phosphore to KPC unpaid on 31 January 1992 invoking a force majeure defense to the purchase agreement. KPC requests compensation for the loss of the partially loaded cargo of sulphur in the quantity and value stated in the above.

340. KPC provides the relevant contracts and related documentation to this claim element as evidence. KPC provides an affidavit as evidence of its claim that the vessel was seized by the Iraqi military following the invasion on an unspecified date and was subsequently removed with the cargo to Umm Al Qasr in Iraq, where the cargo was discharged. Shipping documents were not issued for the partially loaded sulphur cargo. SGS, the joint loadport inspectors in Kuwait, did not issue a certificate of quantity because the loading was incomplete. KPC alleges that the records relating to this cargo were lost during the Iraqi occupation. Only movement records retained by the Mina Al-Ahmadi Refinery are available and these records show that the 7,132 metric tonne of sulphur had been loaded as of the invasion. KPC argues that the contract price is the appropriate value to place on the lost sulphur. KPC asserts that it had contracted to sell 7,132 metric tonnes of sulphur for US$82.00 per tonne, a total of US$584,824.

341. Iraq alleges that there is no substantial evidence, including affidavits by KOC personnel or the crew of Sea Music II, that proves the actual seizure of the sulphur cargo by Iraqi forces. Iraq also argues that KPC's estimate of the quantity of the cargo has no basis and that the

relevant port loading capacity and loading hours do not substantiate the quantity of cargo claimed by KPC. Finally, Iraq asserts that KPC has no right to claim for the sulphur cargo as the cargo is owned by the purchaser.

342. The Panel finds that there is sufficient evidence which established that the Sea Music II and her partial cargo were confiscated by Iraqi forces during their occupation of Kuwait. The Panel also finds that the evidence demonstrates that there was in fact a contract between KPC and the Moroccan purchaser and that there is sufficient evidence to prove that 7,132 metric tonnes of sulphur had been loaded aboard the Sea Music II prior to the ship's confiscation and that the agreed price for that sulphur was US$82 per metric tonne. The evidence further established that KPC had attempted unsuccessfully to obtain payment from the purchaser, Maroc-Phosphore, as KPC could not present complete shipping documents due to the act of confiscation of a part of the cargo by Iraqi forces.

343. Based on the evidence, the Panel finds that KPC has adequately demonstrated that this loss occurred and that it resulted from Iraq's unlawful invasion and occupation of Kuwait. Further, the Panel agrees that the contract price is the correct method of valuing the loss of a commodity such as sulphur when a quantity of the commodity has been collected, identified to a specific contract and sold for a certain sum.

344. The Panel finds, therefore, that KOC's claim for the sulphur contract in the amount of US$584,824 is justified and recommends compensation in this amount.

4. Fixed assets

345. KPC requests compensation in the amount of US$688,000 for losses to its fixed assets in Kuwait. On 2 August 1990, KPC's offices occupied four floors in the Al-Saliyah complex in Kuwait City. These offices were equipped and furnished and accommodated 600 people. KPC also owned about 64 furnished flats in Kuwait City to house its employees. KPC alleges that the Iraqi forces damaged and looted KPC's assets.

346. KPC provides evidence of looting and damage in an affidavit. According to the affidavit, on 6 March 1991 KPC's offices were without electricity, papers were scattered on the floors and the offices were damaged and looted. The office carpets were almost entirely ruined, some water coolers were pulled from the wall and there had been flooding and water leakage. Office facilities such as computers, photocopying machines, printers, projectors and typewriters were stolen. Cars had also been stolen from the KPC car pool, which had been parked in the garage in the KPC office building. The staff accommodations were also looted and

damaged. Only 27 out of 64 of the staff flats were found to be still suitable for accommodation.

347. KPC itemizes this claim element as follows:

Table 26. Kuwait Petroleum Corporation claim amounts

Claim item	Claim amount (KD)	Claim amount (US$)
Office furniture	76,000	261,440
Computers	42,000	144,480
Office equipment	37,000	127,280
Telephones	18,000	61,920
Residence furniture and equipment	27,000	92,880
Total	200,000	688,000

348. To identify the assets destroyed, KPC relies on the remnants of the fixed assets found in its offices after the liberation as well as photographic and testimonial records of what assets existed prior to the invasion. KPC uses this method because the asset registers and other administrative records of KPC's office assets were damaged or destroyed during the looting described above. KPC estimated the proportion of the assets present at 2 August 1990 that were destroyed during the occupation. KPC relies on the report of their accountants for the quantification of this alleged loss. KPC's accountants used accounting records to determine the net book value for each of these assets. The total of the net book values is the claim amount of US$688,000.

349. Iraq alleges that KPC provided no direct evidence of Iraq's responsibility for the loss and damage to KPC's fixed assets. Iraq also alleges that KPC provided no documentary evidence to substantiate the existence of those assets. Iraq further alleges that the claim figure is exaggerated, pointing out that KPC replaced the lost or damaged assets for less than the original cost of those assets.

350. Based on the evidence, the Panel finds that KPC has adequately demonstrated that the fixed assets identified in this claim element were actually lost due to the invasion and occupation. The Panel is satisfied that KPC's method in the circumstances is an acceptable means of identifying a loss such as this when the primary records have been destroyed by Iraq. The Panel's view is further supported by the opinion of the Panel's consultants that the number of assets lost by KPC at its office

was actually much greater than the amount claimed. The Panel also concludes that it is conceivable that the replacement cost of these assets might be lower than their original cost due to the declining market prices of the assets claimed for such as computers. The Panel further finds that net book value is an appropriate value to place on destroyed assets such as those at issue in this claim element.

351. The Panel finds, therefore, that KOC's claim for its fixed assets in the amount of US$688,000 is justified and recommends compensation in this amount.

5. Summary of recommendation

352. The Panel recommends compensation for KPC in the total amount of US$114,953,737 as itemized in the following table:

Table 27. Kuwait Petroleum Corporation recommended compensation

Claim item (Panel adjustment)	Claim amount (US$)	Panel's adjustments to claimant amounts (US$)	Panel's recommended compensation (US$)
Stock at KOC premises	71,200,000	(5,812,360)	65,387,640
Stock at KNPC premises	51,924,000	0	51,924,000
(Insurance premiums returned)		(3,630,727)	(3,630,727)
Sulphur contract	584,824	0	584,824
Fixed assets	688,000	0	688,000
Total	124,396,824	(9,443,087)	114,953,737

VII. CLAIM OF SAUDI ARABIAN TEXACO (CLAIM NO: 4000604)

A. SAT's role in the Saudi Arabian oil industry

353. Saudi Arabian Texaco Inc. ("SAT") is a wholly-owned subsidiary of Texaco Inc. ("Texaco"). Both are corporations created under the laws of the State of Delaware, United States of America.

354. The Kingdom of Saudi Arabia ("Saudi Arabia") and Pacific Western Oil Corporation ("Pacific Western") signed a 60-year Concession Agreement ("Concession Agreement") relating to Saudi Arabia's mineral rights in the PNZ on 20 February 1949. The historical background and the definition of the PNZ is provided in para. 57, supra. As a result of a name change, Getty Oil Company ("Getty Oil") became Pacific Western's successor-in-interest. In 1984, Texaco purchased Getty Oil and, in 1992, changed the name of its operations in the PNZ to Saudi Arabian Texaco Inc. Thus, SAT is the successor-in-interest to Getty Oil, the original holder of Saudi Arabia's concession in the PNZ, and holds the rights and obligations of Getty Oil under the Concession Agreement.

355. SAT asserts that prior to 2 August 1990, it operated as an integrated oil company in the areas of Wafra and Mina Saud in the PNZ. SAT was engaged in the exploration, production, refining and distribution of Saudi Arabia's 50 per cent share of the onshore hydrocarbon reserves in the PNZ. The remaining 50 per cent interest in the hydrocarbon reserves of the PNZ is held onshore by Kuwait Oil Company ("KOC"), and offshore by the Arabian Oil.

356. SAT and KOC have a sharing arrangement known as the "Joint Operation" agreement ("JO") for conducting onshore operations in the PNZ. In general, SAT and KOC divide equally the cost of acquiring and maintaining assets used in the PNZ.

357. SAT claims that it was producing crude oil at an average of 67,400 barrels per day ("BPD") for the 28 months prior to 2 August 1990. This was SAT's 50 per cent share of the oil produced by the JO from three oil fields in the PNZ: Wafra, South Umm Gudair and South Fuwaris. These oil fields had 353 wells producing three types of crude: Eocene, Ratawi and Burgan. The bulk of SAT's production came from the Ratawi and Burgan wells. SAT claims it refined most of its crude production in 1990, processing between 55,000 and 65,000 barrels per day at its own refinery in the PNZ, which was located at Mina Saud SAT employed 910 workers, of whom about 850 were permanent employees.

B. Facts and contentions

1. Nature of the claim

358. SAT claims that between 3 and 8 August 1990, elements of the Iraqi Republican Guard and other Iraqi military units forcibly evicted SAT personnel from the PNZ, occupied some SAT facilities, and forced SAT to evacuate all its personnel. SAT claims that Iraqi forces systematically destroyed SAT's assets: SAT's oil wells were destroyed with explosives and set on fire and most of SAT's oil lifting, processing, storage and transport facilities, including its refinery and shipping terminal, were damaged or destroyed. SAT also claims that it suffered increased costs and loss of profits as a result of interrupted business and delayed projects caused by Iraq's unlawful invasion and occupation of Kuwait.

2. Claim presented

359. In 1992, SAT filed a claim with the Commission requesting compensation in the amount of US$880,258,670 (the "original claim"). The original claim included three elements: losses to physical assets, extraordinary expenses and losses to income producing properties, or loss of profits.

360. In 1997, SAT filed an amended claim that increased the amount of its claim to US$1,519,952,314 (the "amended claim"). The amended claim also contained three elements: losses to physical assets, extraordinary expenses and a "business interruption" claim.

361. The original and amended claims are itemized in the following table:

Table 28. Comparison of SAT's original and amended claims [14]

Claim element (original claim)	Claim amount (US$)	Claim element (amended claim)	Claim amount (US$)
Physical assets	200,564,400	Physical assets	72,171,021
Business losses (Loss of profits)	616,490,470	Business losses (business interruption)	1,380,135,392
Extraordinary expenses	63,203,800	Extraordinary expenses	67,645,901
Interest and claim preparation costs	unstated	Interest and claim preparation costs	unstated
Total	880,258,670	Total	1,519,952,314

362. The principal differences between the original and amended claims are the result of SAT's decision to abandon the loss of profits approach to business loss valuation in favor of a business interruption approach. The loss of profits claim element of the original claim was, in simplest terms, the profit SAT expected to earn on the oil it would have produced but for Iraq's unlawful invasion and occupation of Kuwait. The lost profit approach initially adopted by SAT was to calculate the lost profit by estimating the number of barrels of oil it would have produced during the occupation and reconstruction period and multiplying that figure by the margin it expected to earn on each barrel. SAT alleges that the estimated margin per barrel was based on the historical figures for sales revenues and costs of production, processing and transportation.

363. The business interruption claim element in the amended claim is a claim for the permanent reduction in the value of the business, rather than simply for the loss of profits. The business interruption approach utilized the discounted cash flow ("DCF") method for calculating SAT's business loss. The DCF method ordinarily involves projecting of net cash flows over the economic life of the asset at issue and discounting these cash flows to their present value. SAT however, has applied the DCF method in a somewhat different manner. SAT first estimates the net cash flow its business would have generated through the end of the concession had Iraq's unlawful invasion and occupation not occurred. SAT then compares that theoretical cash flow with the lower net cash flow it actually received and expects to receive through the end of its concession. The business interruption claim amount is calculated as the difference between the two cash flows, discounted to the date of the claim.

364. There is a significant difference between the amounts claimed by SAT in the original claim for loss of profits and in the amended claim for business interruption. In part, this difference is the result of the change in SAT's valuation methods. In its DCF calculations, the costs of repairing and restoring certain assets used to generate income are treated as expenses and accounted for in the cash flow calculation rather than as extraordinary expenses and costs of physical asset losses. SAT's refinery losses are also transferred into its business interruption claim element from its physical assets claim element. Thus, in the amended claim, the use of the DCF method causes a shift in the claim amounts: the physical assets claim amount is reduced while the business loss claim amount is increased.

365. The majority of the increase, however, is the result of SAT's decision to add to its claim for business losses. In the amended claim, SAT alleges that had the invasion and occupation not occurred, it would have implemented an extensive programme of investments and development in the PNZ, which would have greatly increased SAT's cash flow. SAT asserts

that Iraq's unlawful invasion and occupation of Kuwait significantly delayed that programme. This allegation is discussed, infra, at para. 432.

366. As the Panel finds that both SAT's original claim and amended claim have relevant evidence that can and should be considered, the Panel will review the structure of SAT's claim as presented in the amended claim, but the Panel will base its review and findings on the entire body of evidence submitted by SAT, regardless of whether SAT submitted it with the original or amended claim.

(a) Evidence presented in support

367. SAT's primary evidence of the destruction of its physical assets is contained in its contemporaneous internal documents such as a log of events, memoranda, PNZ status reports on damage and repairs to its facilities, photographic records and video tapes. In support of its assertions that Iraqi forces were responsible for this destruction, SAT submitted numerous affidavits and documents that allegedly contained plans of sabotage by the Iraqi forces. Further support is provided in SAT's consultant's reports on the description of its facilities and the assessment of damage. SAT's consultant's reports are based on field surveys from 1994-97 and various documents such as SAT's general ledger, invoice detail report, technical data, KOC's damage assessment reports, the Edeleanu GmbH refinery report, an inventory of assets prepared by SAT for an insurance claim in August 1992 and replacement estimates by SAT's consultants. SAT also produced an affidavit with calculations of various expenses such as rental for temporary offices and employee residences and estimates for the replacement and repair costs for its assets.

(b) Iraq's response

368. Iraq generally disputes the compensability and certain valuation aspects of SAT's claims for reasons summarized in the following paragraphs.

(a) The evaluation of losses is unreliable, insufficient and improper. For example, no downward adjustments were made to the full replacement cost of lost assets like storage tanks in Wafra and Mina Saud.

(b) The claim is for indirect losses because the damages were the result of Allied bombings during and after the Iraqi WBC troop withdrawal.

(c) There are discrepancies in information in SAT's claim such as the differences in SAT's annual production figures given in the claim and interrogatories that resulted in an increase of SAT's claim.

(d) SAT did not sufficiently mitigate its loss by accelerating their recovery plans and utilizing promptly their assets and resources and reducing the number of active employees.

(e) SAT substantially altered its systems related to gathering and pumping of crude oil to loading facilities, hindering the objective of reconstructing the facilities to their previous state.

(f) SAT's claim for US$72,171,021 for reconstruction works is unreasonable and disproportionate to the volume of work required and that the total net book value of SAT's assets is US$26,973,646.

369. In addition to the general responses in the above, Iraq contests individual claim elements on specific grounds, which will be mentioned throughout in the analysis of the claim.

370. The Panel has reviewed Iraq's general and specific replies to SAT's claim, some of which are more fully addressed in the context of the discussion below. Nevertheless, the Panel takes this opportunity to summarize its findings on the general objections to this claim expressed by Iraq.

3. The Panel's general findings

371. The Panel's general findings regarding the claims in this instalment are recorded in para. 94-99, supra, and are adopted for the purposes of the report on this claim.

372. To the extent that the evidence presented by SAT may be contradicted by contemporaneous corporate records, or does not reflect accepted business practices in the oil and gas industry, the Panel examined the evidence presented with heightened scrutiny in order to determine whether the claimant satisfied its evidentiary obligations under Article 35(3).

373. The Panel also notes that SAT had every incentive to restore production as quickly and effectively as possible. Based on the evidence, the Panel finds that SAT has properly attempted to mitigate its losses by commencing its reconstruction efforts as soon as possible in the circumstances, utilizing available assets and resources, as well as reducing costs when and where appropriate. As will be seen in the analysis of each of the individual claim elements, SAT has made deductions for betterment that it gained in respect of the alteration of its systems. The Panel finds that SAT's approach in its reconstruction efforts are justified.

374. The Panel further finds that consistent with para. 21 (a) of Governing Council decision 7, Iraq's liability includes any direct loss,

damage or injury suffered as a result of "[m]ilitary operations or threat of military action by either side during the period 2 August 1990 to 2 March 1991." (Emphasis added.) Consequently, the Panel finds that, consistent with the Panel's decision in the WbC Claim, supra, para. 82, Iraq is liable for any direct loss, damage or injury whether caused by its own or by the coalition armed forces.

C. Analysis of the claim

1. Physical assets

375. In the amended claim, SAT requests compensation in the amount of US$72,171,021 for losses to its physical assets at Mina Saud and Wafra. SAT jointly owned with KOC certain assets at Wafra's main gathering centre and the oil fields of Wafra, South Umm Gudair and South Fuwaris. SAT severally owned all assets at Mina Saud, including a refinery. SAT alleges that during the invasion and occupation, the Iraqi forces systematically destroyed these facilities. SAT alleges that its refinery at Mina Saud had been destroyed, its shipping terminal had been severely damaged, 90 per cent of the administrative support, residential and medical facilities had been severely damaged and seven storage tanks had been destroyed. SAT also alleges that in Wafra, 90 per cent of the oil lifting, processing, storage and transportation facilities had been destroyed. Further, 90 per cent of the administrative support, residential and medical facilities had been destroyed or severely damaged. SAT further alleges that in the Wafra oil fields, approximately 300 active wells in Wafra had been damaged by explosives and oil was flowing unchecked onto the surface from 30 wells. Six of the fields were on fire. At the gathering centres, 19 gathering subcentres had been heavily damaged, and eight storage tanks had been destroyed at the Wafra main gathering centre.

376. Based on the evidence, the Panel finds that SAT's physical assets have been damaged as alleged by SAT and that this damage is the direct result of Iraq's unlawful invasion and occupation of Kuwait.

377. SAT bases the amended claim's physical assets claim element amount on three cost components:

(a) the total replacement and repair costs that SAT incurred and paid for the damage to its assets at Mina Saud and Wafra up to and including 21 November 1997,

(b) SAT's estimated cost of replacement and repair of its unreplaced assets, and

(c) SAT's 50 per cent share of the total replacement and repair costs for damage to Joint Operation ("JO") assets at Wafra and in the Wafra oil fields operated by the JO (JO costs).

378. In the amended claim, SAT capitalized a minor portion of its JO costs and expensed the balance of these costs. The capitalized portion of SAT's JO costs forms part of SAT's physical asset claim while the expensed portion of the JO costs forms part of SAT's business interruption claim. From these costs, SAT subtracts certain amounts to adjust for refinery losses, which SAT had transferred to its business interruption claim element, and expenses related to restoration of physical assets, which SAT had transferred to its extraordinary expenses claim element. SAT also subtracts certain amounts for depreciation, betterment and other benefits it received from reinstatement of its facilities where it deems appropriate.

(a) Mina Saud

379. In the amended claim, SAT requests compensation in the amount of US$47,490,480 for the losses to its Mina Saud physical facilities. As a result of a calculation error, the Panel finds that SAT has stated this amount as US$47,490,478.

380. SAT's calculations are shown in the following table:

Table 29. SAT's claim for physical assets at Mina Saud

Claim element		Claim amount (US$)
Physical Facilities		
-Tank farm		16,203,736
-Workshops		499,675
-Marine terminal		285,340
-Residential facilities		1,616,489
-Administration & general facilities		1,365,347
-Transfer pipelines		90,154
	Subtotal	20,060,741
Stocks		
-Crude oil and products in tanks		25,688,388
-Crude oil and products in pipelines		1,054,638
-Warehouse inventory		686,713
	Subtotal	27,429,739
Total		47,490,480

381. Based on the evidence, the Panel finds that SAT's replacement costs and estimates of replacement costs are justified. However, SAT uses residual values of between 10 and 20 per cent for its Mina Saud assets. The Panel finds that lower residual values of between one and 10 per cent should be employed in valuing the assets lost, in accordance with the industry norms for the items at issue due to the remote location and harsh climatic conditions in which the assets were used. The adjustments for each item comprising this claim element are reflected in the following paragraphs.

382. SAT first requests compensation in the amount of US$16,203,736 for unreplaced and replaced tankage that were destroyed during Iraq's unlawful invasion and occupation of Kuwait. Based on the evidence, the Panel finds that the replacement costs for the tankage are justified. However, as discussed in para. 121, supra, the Panel finds that the residual values were overstated and recommends a five per cent residual value for the tankage. As a result of these adjustments, the Panel finds that SAT's claim for tankage should be reduced to US$2,247,218.

383. SAT requests compensation in the amount of US$499,675 for workshops, warehouses and associated buildings that were destroyed, damaged and/or vandalized. Based on the evidence, the Panel finds that the replacement costs for these assets are justified. However, as discussed in para. 122, supra, the Panel finds that the residual values were overstated and recommends a residual value of five per cent for plant and machinery and one per cent for structures and buildings. As a result of these adjustments, the Panel finds that SAT's claim for these assets should be reduced to US$146,798.

384. SAT requests compensation in the amount of US$285,340 for the damaged assets at its marine terminal. Based on the evidence, the Panel finds that the replacement costs for these assets are justified. However, as discussed in para. 121, supra, the Panel finds that the residual values are overstated and recommends a residual value of five per cent for these assets. As a result of these adjustments, the Panel finds that SAT's claim for these assets should be reduced to US$229,049.

385. SAT requests compensation of US$1,616,489 for its damaged and vandalized residential facilities. Based on the evidence, the Panel finds that the replacement costs for these assets are justified. However, as discussed in para. 122, supra, the Panel finds that the residual values are overstated and recommends residual values of five per cent for unit furnishings and one percent for prefabricated houses. As a result of these adjustments, the Panel finds that SAT's claim for its residential facilities should be reduced to US$810,935.

386. SAT requests compensation in the amount of US$1,365,347 for its damaged administration and general facilities such as its guest houses, fire appliances, a used fire truck, furniture and office equipment. Based on the evidence, the Panel finds that the replacement costs for these assets are justified. However, the Panel finds that the residual values are overstated and recommends residual values of one per cent for the guest house, five per cent for furniture and office equipment and 10 per cent for fire appliances and the used fire truck. As a result of these adjustments, the Panel finds that SAT's claim for these facilities should be reduced to US$1,102,687.

387. SAT requests compensation in the amount of US$90,154 for its damaged transfer pipelines. Based on the evidence, the Panel finds that the capitalized expenditure on repairing these pipelines are justified and finds that SAT should be compensated this amount.

388. Based on the adjustments identified above, the Panel finds that US$4,626,841 is an appropriate level of compensation for the physical assets lost at Mina Saud.

389. Some of SAT's physical asset reconstruction costs at Mina Saud were removed from the physical assets claim element in the amended claim. These losses were included in the original claim for physical assets. As noted above, however, in the amended claim much of these costs were addressed in the context of the business interruption claim. For the same reasons, the value of SAT's refinery at Mina Saud does not appear in the amended claim as part of the physical assets claim element.

390. Iraq alleges that SAT made no attempts to repair or salvage the process facilities of the refinery because the old units and systems were inefficient and therefore SAT preferred to claim compensation equivalent to rebuilding a new refinery.

391. Based on the nature of these losses, review of evidence submitted, verification and other evidence, the Panel is of the view that SAT's physical asset reconstruction costs and losses to its refinery at Mina Saud should be included in SAT's physical assets claim element. Accordingly, the Panel directed its consultants to evaluate SAT's incurred expenses for its physical asset reconstruction costs and the depreciated value of the destroyed Mina Saud refinery. Based on the evidence submitted by SAT as part of the original claim for these items, the Panel finds that the physical asset reconstruction costs in the amount of US$16,991,857 were incurred by SAT at Mina Saud and that US$15,177,771 is an appropriate level of compensation for the depreciated value of the Mina Saud refinery.

392. After the adjustments for SAT's incurred physical asset reconstruction expenses and the evaluation of SAT's refinery, the Panel finds that SAT's losses to its physical assets at Mina Saud are US$36,796,469.

393. SAT requests compensation in the amount of US$25,688,388 for the value of stocks of crude oil and products in inventory at its tank farm at Mina Saud. SAT claims that as a result of the damage to its tank farms, its stocks were spilled, lost and/or stolen. These stocks included crude oil, fuel oil, naphtha and asphalt. SAT determines the amount of this claim element by estimating its average profit margin per barrel for each of these products, which it calculates by subtracting the per barrel cost of its crude oil and products from the per barrel selling price. SAT then estimates the number of lost barrels of crude oil and products it could have produced during the occupation and reconstruction periods and multiplies the estimated per barrel profit margin figure by the number of lost barrels.

394. SAT alleges that at the time of the invasion, its tanks and pipelines contained 1,345,019 barrels of crude oil and oil products. This amount consisted of 386,250 barrels of crude oil; 946,500 barrels of refined

products such as fuel oil, diesel fuel and naphtha; and 12,269 barrels of other oil products, such as asphalt.

395. Based on a review of the claim documentation and other evidence submitted, as well as an investigation by the secretariat and the Panel's consultants, the Panel concluded that the volume of stock in these tanks and pipelines on the date of the invasion was actually 1,119,171 barrels. This conclusion is based in part on the lower oil stock volume stated in SAT's own oil movement records. The Panel finds, therefore that the actual volume of crude oil and product inventories at SAT's tank farm in Mina Saud was 1,119,171 barrels.

396. The Panel also concludes that SAT's refinery yields and the prices used to value the crude oil and oil products, with the exception of naphtha prices, are supported by evidence of contemporary market prices for these commodities. The Panel finds that the naphtha prices used by SAT were slightly overstated and, therefore, finds that the claim element for loss of naphtha stock should be valued using published market prices for naphtha at the time of the invasion and occupation of Kuwait.

397. SAT asserts that during its normal operations, its tank farm's pipeline would have been full of crude and refined product, known as pipefill. Based on the evidence submitted and general practices in the industry, the Panel's consultants concluded that this assumption was correct. The Panel's consultants also concluded that where SAT's pipelines were found to be damaged, it was reasonable to conclude that the corresponding volume of pipefill had been lost.

398. With respect to the asphalt, diesel fuel and fuel oil claim items, SAT's consultants assume in their calculations that at the time of the invasion, asphalt and fuel tanks were 50 per cent full, diesel tanks were 90 per cent full and that the remainder of the hydrocarbon tanks were 100 per cent full. These assertions are not adequately supported by the evidence. Based on the historical records of SAT and other information provided by SAT, the Panel estimates that these tanks were no more than 60 per cent full on average. Because there is no evidence presented to indicate that SAT had greater than average volumes at the time of the invasion, the Panel bases its evaluation of the claim element for these products on the average volumes and reduces the claim amount accordingly.

399. After the adjustments discussed in the above, the Panel finds that SAT's crude and product inventory losses should be reduced to US$20,455,693.

400. SAT also requests compensation in the amount of US$686,713 for its main warehouse stock. SAT calculates this amount by comparing the difference between the amounts of its main warehouse stock that were

written off in its December 1990 general ledger and the reinstatement amounts of its main warehouse stock stated in its August 1991 general ledger. SAT then treats the difference in amounts between its general ledgers as the best estimate of the original cost of the warehouse stock stolen or destroyed during the invasion and occupation. SAT further applies a 25 per cent price escalation factor to its estimate.

401. Based on the evidence submitted, the Panel's consultants concluded that SAT's estimate of the original cost of the warehouse stock was reasonable. However, the Panel's consultants concluded that the price escalation factor of 25 per cent was overstated for the warehouse stock at issue. The Panel agrees with its consultants that a price escalation factor of 6 per cent is more reasonable given the time and nature of the materials involved. Further, the Panel's consultants concluded that materials in transit in the amount of US$47,420 and material movement cost in the amount of US$36,272, which form part of the claimed warehouse stock amount, should be excluded from the application of the price escalation factor.

402. After the adjustments discussed above, the Panel finds that SAT's main warehouse stock loss should be reduced to US$579,822.

403. Further, SAT requests compensation of US$1,054,638 for crude and product lost in its pipelines that were used to transfer the crude and product from its Wafra site to its Mina Saud facility. SAT calculates this amount by first subtracting the cost of the crude and product per barrel from the selling price of the crude and product per barrel. SAT then multiplies the figure obtained from this calculation by the number of barrels lost.

404. Based on the evidence submitted, the Panel concluded that as the transfer pipelines in issue were found damaged, it is reasonable to conclude that the contents of these pipelines had been spilt and lost. The Panel directed its consultants to calculate the number of barrels claimed to be lost and the Panel agreed with its consultants' opinion that they were reasonable and matched the pipelines' capacity. The Panel's consultants further were of the opinion that the refinery yields and prices used in SAT's calculations were reasonable with the exception of naphtha prices, which were slightly overstated. The Panel agreed with the opinion of its consultants and accordingly directed that a deduction of US$18,288 should be made to account for SAT's overstated naphtha prices.

405. Based on the adjustments above, the Panel finds that SAT's loss of crude and product should be reduced to US$1,036,350.

406. The Panel finds that the amount of SAT's total stock losses claim at Mina Saud that is supported by the evidence is US$22,071,865.

407. Based on the foregoing findings, the Panel recommends compensation for SAT's claim for its physical assets at Mina Saud in the amount of US$58,868,334 as itemized in the following table:

Table 30. Physical assets at Mina Saud recommended compensation

Claim element	Claim amount (US$)	Panel's adjustments (US$)	Recommended compensation (US$)
Physical Facilities			
-Tank farm	16,203,736	(13,956,518)	2,247,218
-Workshops	499,675	(352,877)	146,798
-Marine terminal	285,340	(56,291)	229,049
-Residential facilities	1,616,489	(805,554)	810,935
-Administration & general facilities	1,365,347	(262,660)	1,102,687
-Transfer pipelines	90,154	0	90,154
Subtotal	20,060,741	(15,433,900)	4,626,841
Stocks			
-Crude oil and products in tanks	25,688,388	(5,232,695)	20,455,693
-Crude oil and products in pipelines	1,054,638	(18,288)	1,036,350
-Warehouse inventory	686,713	(106,891)	579,822
Subtotal	27,429,739	(5,357,874)	22,071,865
Claim elements transferred by Panel from Business Losses Claim			
-Mina Saud refinery		15,177,771	15,177,771
-Direct reconstruction expenses (at Mina Saud)		16,991,857	16,991,857
Subtotal		32,169,628	32,169,628
Total (excluding transferred claim elements)	47,490,480	(20,791,774)	26,698,706
Total (including transferred claim elements)	47,490,480	11,377,854	58,868,334

(b) Wafra

408. SAT requests compensation in the amount of US$24,680,546 for the losses to its physical facilities in the Wafra oil fields. As a result of a calculation error, the Panel finds that SAT has stated this amount as US$24,680,543.

409. SAT's calculations are shown in the following table:

Table 31. SAT's claim for physical assets at Wafra

Claim element		Claim amount (US$)
Physical Facilities		
-Incurred Joint Operations (JO) costs		231,323
-Oil fields and oil wells		5,301,516
-Sub gathering centres		1,140,732
-Main gathering centre		7,279,685
-SAT Wafra camp (SAT and JO assets)		931,445
-KOC Wafra camp (JO assets)		305,241
	Subtotal	15,189,942
Stocks		
-Crude oil inventory at Wafra		3,240,236
-Warehouse inventory at Wafra		6,250,368
	Subtotal	9,490,604
Total		24,680,546

410. Based on the evidence, the Panel finds that SAT's records of actual replacement costs are accurate and its estimates of replacement costs are justified. However, as with its Mina Saud claim element, SAT uses a residual value of between 10 and 20 per cent for its Wafra assets. The Panel finds that lower residual values of between one and 10 per cent should be employed in valuing the assets lost, in accordance with the industry norms for the items at issue due to the remote location and harsh climatic conditions in which the assets were used. The adjustments for each item comprising this claim element are reflected in the following paragraphs.

411. SAT requests compensation in the amount of US$231,323 for incurred JO costs based on half of KOC's claim for JO costs. Based on the evidence,

the Panel finds that these costs should be substituted by SAT's actual incurred costs for its physical reconstruction costs at Wafra as there was a potential element of double counting. As a result, the Panel does not recommend that this claim amount be compensated.

412. SAT requests compensation in the amount of US$5,301,516 for losses to its oil fields and oil wells and related equipment. Based on the evidence, the Panel finds that the amount claimed by SAT for its lost wells, core sample, flowlines and trunk lines is justified. As discussed in para. 121, supra, however, the Panel finds that the 10 per cent residual value used by KOC for the well pumps is overstated and recommends a residual value of five per cent for these assets. The Panel also agreed with its consultants' opinion that deductions of 15 per cent for reduced maintenance costs and 10 per cent to reflect betterment should be made for Eocene pumps. As a result of these adjustments, the Panel finds that SAT's claim for losses to its oil fields and oil wells and related equipment should be reduced to US$4,586,240.

413. SAT requests compensation in the amount of US$1,140,732 for losses to assets at its sub gathering centres. Based on the evidence, the Panel finds that the amount claimed for the estimated reinstatement costs of these assets is justified. As discussed in para. 121, supra, however, the Panel finds that the 10 per cent residual value used by KOC for the assets at the sub gathering centres is overstated and recommends a residual value of five percent for these assets. As a result of these adjustments, the Panel finds that SAT's claim for losses to assets at its sub gathering centres should be reduced to US$608,663.

414. SAT requests compensation in the amount of US$7,279,685 for its destroyed or damaged tankage at its main gathering centre. Based on the evidence, the Panel finds that the amount claimed for the replacement costs of these assets is justified. As discussed in para. 121, supra, however, the Panel finds that the 10 per cent residual value used by KOC for the assets at the main gathering centre is overstated and recommends a residual value of five percent for these assets. As a result of these adjustments, the Panel finds that SAT's claim for losses to its assets at the main gathering centre should be reduced to US$1,979,817.

415. SAT requests compensation in the amount of US$931,445 for its destroyed, damaged or lost assets at the SAT Wafra camp. Based on the evidence, the Panel finds that the amount claimed for the replacement costs of these assets is justified. As discussed in para. 121-122, supra, the Panel finds that the 10 per cent residual value used by KOC for the assets at SAT's Wafra camp is overstated and recommends a residual value of five percent for plant and machinery and one per cent for structures and buildings. As a result of these adjustments, the Panel finds that SAT's

claim for losses to its assets at SAT's Wafra camp should be reduced to US$401,844.

416. SAT requests compensation in the amount of US$305,241 for its destroyed or damaged or lost assets at the KOC's Wafra camp. Based on the evidence, the Panel finds that the amount claimed for the replacement costs of these assets is justified. As discussed in para. 121-122, supra, however, the Panel finds that the residual values used by KOC for the assets at its Wafra camp are overstated and recommends a residual value of five percent for plant and machinery and one per cent for structures and buildings. As a result of these adjustments, the Panel finds that SAT's claim for losses to its assets at KOC's Wafra camp should be reduced to US$218,120.

417. Based on the adjustments above, the Panel finds that US$7,794,684 is an appropriate level of compensation for the pnysical assets lost at Wafra.

418. The amended claim for physical assets does not contain a separate claim element for the SAT's share of the JO's direct reconstruction costs at Wafra. The Panel directed its consultants to evaluate the loss of the direct reconstruction expenses incurred by SAT at Wafra. Based on the evidence submitted by SAT with the original claim for these items and on other evidence developed during the claims development process, the Panel finds that US$33,827,486 is an appropriate level of compensation for SAT's direct reconstruction costs at Wafra.

419. After the adjustments for SAT's incurred physical reconstruction expenses at Wafra, the Panel finds that SAT's losses to its physical assets at Wafra are US$41,622,170.

420. SAT requests compensation in the amount of US$3,240,236 for lost crude and product inventory at Wafra, consisting of 126,000 barrels of crude in its tanks and 38,927 barrels of crude in its pipelines. SAT calculates this amount by subtracting the cost of the crude per barrel from the selling price of the crude per barrel then multiplying the figure obtained by the number of lost barrels.

421. Based on the evidence submitted, the Panel concludes that the tank capacities at Wafra are overstated. For the reasons detailed in para. 398, supra, the Panel finds that the volume of crude oil in SAT's tanks at Wafra was likely no more than 60 per cent of capacity. The Panel also finds that as SAT's pipelines were found to be damaged, it is reasonable to conclude that the crude contained in the pipelines were spilt and lost. The Panel further finds that the refinery yields and prices used by SAT in its calculations are reasonable with the exception of naphtha prices, which were slightly overstated. The Panel made a deduction to SAT's naphtha prices to compensate for the overstatement.

422. After the adjustments discussed above, the Panel finds that SAT's crude and product inventory losses at Wafra should be reduced to US$2,211,631.

423. SAT also requests compensation in the amount of US$6,250,368 for its main warehouse stock in Wafra. SAT calculates this amount by comparing the difference between the amounts of its main warehouse stock that were written off in its December 1990 general ledger and the reinstatement amounts of its main warehouse stock stated in its August 1991 general ledger. SAT then treated the difference in amounts in its general ledgers as the best estimate of the original cost of the warehouse stock stolen or destroyed during the invasion and occupation. SAT also deducted 50 per cent of the cost related to its refinery stock to account for its refinery claim included in its business interruption claim element. SAT then applied a 25 per cent price escalation factor to its estimate.

424. Based on the evidence submitted, the Panel concludes that SAT's estimate of the original cost of the warehouse stock was reasonable. The Panel also concludes, however, that the price escalation factor of 25 per cent was overstated for the warehouse stock at issue. The Panel finds that a price escalation factor of six per cent is more reasonable. Further, the Panel's consultants recommended that materials in transit in the amount of US$67,238, which form part of the claimed warehouse stock amount should be excluded from the application of the price escalation factor. The Panel agrees with this recommendation.

425. After the adjustments discussed above, the Panel finds that SAT's claim for lost main warehouse stock should be reduced to US$5,310,532.

426. The Panel finds that the reasonable amount of SAT's claim for its stock losses at Wafra is US$7,522,163 as itemized in the following table.

427. Based on the foregoing findings, the Panel recommends compensation for SAT's claim in the amount of US$49,144,333 for its physical assets at Wafra as itemized in the following table:

Table 32. Physical assets at Wafra recommended compensation

Claim element	Claim amount (US$)	Panel's adjustments (US$)	Recommended compensation (US$)
Physical Facilities			
-Incurred Joint Operations (JO) costs	231,323	(231,323)	0
-Oil fields and oil wells	5,301,516	(715,276)	4,586,240
-Sub gathering centres	1,140,732	(532,069)	608,663
-Main gathering centre	7,279,685	(5,299,868)	1,979,817
-SAT Wafra camp (SAT and JO assets)	931,445	(529,601)	401,844
-KOC Wafra camp (JO assets)	305,241	(87,121)	218,120
Subtotal	15,189,942	(7,395,258)	7,794,684
Stocks			
-Crude oil inventory at Wafra	3,240,236	(1,028,605)	2,211,631
-Warehouse inventory at Wafra	6,250,368	(939,836)	5,310,532
Subtotal	9,490,604	(1,968,441)	7,522,163
Claim element transferred by Panel from Business Losses Claim			
-Direct reconstruction expenses (at Wafra)		33,827,486	33,827,486
Total (excluding transferred claim elements)	24,680,546	(9,363,699)	15,316,847
Total (including transferred claim elements)	24,680,546	24,463,787	49,144,333

2. Business losses

428. In its original claim, SAT requests compensation for business losses in the amount of US$616,490,470 for loss of profits resulting from interruption of oil production. SAT alleges that oil production was interrupted as a result of the invasion and occupation of Kuwait and the subsequent destruction of its assets at Mina Saud, Wafra and the PNZ oil fields. SAT requests compensation for the loss of profits it alleges that

it would have earned on that oil production but for Iraq's unlawful invasion and occupation of Kuwait.

429. SAT produces an affidavit with calculations of lost profits and certain financial and operations data, including financial statements, in support of this claim element. SAT assumes that it would have continued to produce at pre-invasion levels of 65,000 barrels per day had there been no invasion. SAT then calculates an average net profit per barrel based on its performance for the three and a half year period preceding the invasion. SAT alleges that it would have lost profits from the period of 2 August 1990 through to 31 December 1995, the date on which the production was projected to be restored to pre-invasion levels. SAT then multiplies its estimated average net profit per barrel by the number of barrels that it claims it would have produced during this period. From that figure, SAT subtracts the estimated value of partial production during the loss period to obtain the lost profits claim amount of US$616,490,470.

430. The Panel learned during the investigation of the claim that the accounting records used to support the claimed sales prices and to derive the estimated net profit per barrel were not based on actual sales transactions, but were instead based on a theoretical sales price, known as the tax reference price ("TRP"), that Saudi Arabia required SAT to use to calculate its tax obligations to Saudia Arabia. TRP was, on average, higher than the price SAT actually received for its oil. Thus, use of TRP to calculate profit has the effect of overstating the price received and, therefore, the profit earned. SAT ultimately supplied records from which the Panel could more accurately estimate SAT's actual gross profit per barrel.

431. In the amended claim, SAT adopts a new method of valuing its business loss claim element, resulting in the increase of this claim element to US$1,380,135,392. Rather than the method used in the original business loss claim element, SAT asserts that the invasion and occupation of Kuwait "damaged" SAT as a going concern. SAT bases this assertion on its estimation that the volume of oil production lost as a result of the invasion and occupation will be recovered, if at all, only slowly. SAT seeks to quantify this damage by comparing two numbers: (i) the net present value of the "no-invasion" cash flow that SAT estimates it would have received from the "undamaged SAT" from the date of the invasion through the end of its concession if the invasion and occupation had never occurred, and (ii) the net present value of the cash flow that SAT estimates that it will receive from the "damaged SAT" over the same period.

432. Most of the difference between the business loss claim elements in the original and amended claims is the result of SAT's decision to include in its projected "no-invasion" cash flow estimates the effects of a proposed investment programme. SAT asserts that at the time of the

invasion it had prepared, approved, and begun to implement a programme of investments in its operations in the PNZ that would have resulted in significant increases in crude oil production. This programme is detailed in SAT's 1991-1995 Strategic Plan, which was submitted with the amended claim. SAT claims that, at the time of the invasion, SAT was preparing to implement this investment programme and, therefore, that this programme was delayed by the invasion.

433. Iraq asserts that SAT's use of future strategic and management plans such as the investment programme in its claim for loss of earnings is not justified legally or financially for the following reasons:

(a) SAT's 1991-1995 Strategic Plan has no detailed project schedule or evidence of authorization prior to August 1990 and is preliminary and speculative.

(b) The methodology adopted by SAT to calculate its loss to income producing properties is hypothetical because it focuses on forecasts and future projections over long future periods and therefore any changes in any of these assumptions can alter the result drastically.

(c) Iraq also alleges that the statistical method in applying decline curve analysis employed by SAT's consultants was not accurate and has wide margin of errors.

(d) Iraq disputes SAT's assumptions of positive earnings until the end of the Concession. Iraq alleges that the wide fluctuation of profitability over the reported periods also shows that a claim cannot be based on forecasted earnings.

(e) The implementation of the refinery expansion plan as part of SAT's investment programme assumes that the crude oil production matches the new refinery capacity and that there is a constant relationship between prices and costs of marketing for oil products.

(f) SAT's claim for increased operating expenses lacks supporting evidence. Iraq alleges that this claim possibly overlaps with the extraordinary expenses claim.

434. During the verification programme, the secretariat and the Panel's consultants spent considerable time investigating this claim. SAT produced the evidence it considered supported this claim. After reviewing SAT's submissions, however, the Panel concludes that the evidence does not support SAT's claim for lost profits as presented in its amended claim. The basis for this conclusion is discussed in the remaining paragraphs of this section.

435. SAT argues that the discounted cash flow method is specifically mentioned by the Governing Council in decision 9 as one of the methods that may be used to value business losses, and therefore, that it is using a method endorsed by the Governing Council. In article 18 of decision 9, the Governing Council states that where the market value of a property -

> "cannot be ascertained, the economic or current value of that asset can be ascertained by the *discounted cash flow (DCF)* method [...]. The DCF method calculates the value at one specified time of cash flows that are to be received at a different time by discounting the yearly net cash flows to present value."

436. The Panel notes, however, that this method is mentioned only as one of several methods that the Panel may employ in valuing business losses; it is ultimately the Panel's choice as to which method most accurately values a claimant's loss. The Panel does not consider that the approach to valuation used by SAT in its amended claim is appropriate for losses of this nature for several reasons that are discussed below.

437. At the outset, the Panel finds that the Governing Council has placed a limitation on the scope of compensable losses. The Governing Council states, in article 17 of decision 9, that

> "In the event that the business has been rebuilt and resumed, . . ., compensation may only be claimed for the loss suffered during the relevant period."

438. The Governing Council does not explicitly define the term "relevant period," but in the context in which it is used, it appears to the Panel that the Governing Council intended that the relevant period be defined as the period between the date of impairment of the business and the date on which the business was or could have been rebuilt and resumed operations at pre-invasion levels. In so doing, the Governing Council has placed an implicit limit on the scope of consequential losses that are compensable before the Commission, and the Panel must pay due regard to this limitation.

439. Based on this interpretation, the Panel concludes that where an income-producing property, i.e., an asset or a group of assets, such as a business, has been completely destroyed or irreparably damaged, the DCF method can be used to estimate the cash flows through the end of the property's expected economic life in order to value that property. Where the asset or business can be repaired or resumed, however, the DCF method will not be an appropriate measure of loss to the extent that it takes into account estimated losses beyond the restoration date of the asset or business.

440. SAT argues that the combination of the delay in production caused by the invasion and occupation and the fact that the concession is of a limited duration has caused a permanent diminution in the value of SAT as an income-producing property. Because this loss in value cannot be recovered before the end of the concession, SAT concludes that the relevant period of loss is the entire life of the concession and the application of the DCF loss calculation method is appropriate.

441. SAT reaches its conclusion through a complicated series of projections, involving two separate DCF calculations, which purport to demonstrate that the net cash flow lost as a result of the invasion will not be recovered before the end of the concession in 2009. First, SAT calculates the projected cash flow it would have received through 2009 but for the invasion - the "no-invasion" cash flow. Second, SAT calculates and projects the cash flow that it will actually receive through 2009 - the "actual" cash flow. In both cases, the calculations are made on the basis of an assumed price and cost structure during the period. Third, SAT assumes that it would have implemented the alleged investment programme and estimates the amount by which this programme would have increased its revenues. SAT then adjusts its projections of no-invasion cash flow to account for these increases.

442. The principal effect of this adjustment in the projected "no-invasion" cash flow is to increase significantly the amount of the lost cash flow in the period immediately following 2 August 1990. SAT argues that this "lost" cash flow is recovered only after actual cash flow begins to exceed the projected no-invasion cash flow. Because of the size of the "lost" cash flow and the limited remaining life of the concession, SAT calculates that the "lost" cash flow cannot be recovered by the end of the concession. Therefore, in SAT's view, the loss period extends through the end of the concession.

443. Iraq alleges that SAT's alleged inability to recover lost production is irrelevant because Iraq believes that SAT's concession will be extended for the following reasons: Firstly, all concession agreements provide extensions in the form of force majeure articles, secondly, the concession is viable for all parties in the circumstances and thirdly, the reservoir study indicates that the reserves are not sufficiently large to warrant the establishment of new agreements.

444. The Panel is not persuaded by SAT's arguments. First, SAT ignores the fact that its principal asset is its concession from Saudi Arabia. That asset has not been lost nor does SAT allege that it has been destroyed. SAT has restored and resumed its operation of that concession, although it claims it is in a different form than before the invasion. Thus, the Panel finds that, under the limitations placed by decision 9, SAT may only claim for the business losses incurred during the relevant period

- the time between the cessation of operations following the invasion and the resumption of its operations at pre-invasion levels. The DCF calculations employed by SAT, however, project SAT's losses through the end of the concession in 2009, far beyond the relevant period contemplated in decision 9. For these reasons, the Panel finds that SAT's use of this method is not an appropriate method of valuing SAT's loss and SAT's alleged inability to recover lost production is irrelevant.

445. In addition to the fact that the DCF method employed by SAT exceeds the scope of compensable losses, as set forth in decision 9, it also exceeds the Governing Council's limits on the nature of losses that are compensable. The economic reality of SAT's amended claim is that SAT requests compensation for income it estimates it would have been able to earn but for the invasion and occupation. In essence, it seeks to recover lost future profits. For the purposes of this inquiry, the Panel does not find any relevant distinction between loss of future cash flow and loss of future profits - each is concerned with the estimated future economic effects of present actions. The Governing Council stipulates the standard by which loss of future profits can be compensable and the method of valuation that will adhere to this standard. In article 19 of decision 9, the Governing Council states that

> "In principle, the economic value of a business may include loss of future earnings and profits where they can be ascertained with reasonable certainty. [. . .] a number of such businesses can be or could have been rebuilt and resumed. The method of a valuation should therefore be one that focuses on past performance rather than on forecasts and projections into the future. Compensation should be provided if the loss can be ascertained with reasonable certainty based on prior earnings or profits."

446. With respect to SAT's claim, the Panel finds that SAT's valuation in its amended claim of its lost future earnings does not adhere to the standard and method stipulated by the Governing Council. SAT estimates that it would have increased its cash flows but for the invasion and bases its estimated increase predominantly on its alleged investment programme. The investment programme on which so much of SAT's business loss calculations depend is not based on past performance - it is based on the hypothetical effects of a series of plans that had not been implemented at the time of the invasion.

447. SAT argues that its past experiences with oil operations in the PNZ allow it to estimate the revenue producing effects of its proposed investments. Based on the evidence submitted, the Panel finds, however, that SAT can only use past data to project its costs. SAT admits that the amount of oil that will flow from a new well is a projection of future events. Estimation of the production from an undrilled oil well is the

essence of a forecast or projection into the future. The Panel finds, therefore, that SAT's estimations for its future cash flows as projected effects of the investment programme cannot be ascertained with reasonable certainty and are not based on SAT's past performance as required by the Governing Council. As a result, the Panel finds that the effects of the investment programme may not be considered when evaluating SAT's losses.

448. It is nonetheless certain, however, that SAT experienced a real loss from its inability to produce and sell oil during the invasion and restoration period. The Panel finds that the losses resulting from this inability to produce and sell oil can be measured by reference to past performance. SAT's original claim is based on these parameters of loss and referred to SAT's past performance to calculate SAT's business losses. The Panel finds, therefore, that the method in SAT's original claim is more appropriate to value the nature of SAT's business loss during the invasion and restoration period. The Panel notes, however, that it has transferred certain elements of the amended business losses claim to the claim for physical assets. (See discussion at para. 389-391, supra.)

449. With respect to SAT's original claim, the Panel finds that SAT has underestimated the production rate in the PNZ. SAT claims a total of 65,000 barrels per day, which it calculates as 50 per cent of the total estimated production of 130,000 BPD. In fact, based on evidence obtained following the filing of the claim, the Panel determined that the PNZ production rate was 133,436 BPD, which gives SAT a share of 66,718 BPD.

450. The Panel also finds, however, that production was restored in April 1995, rather than in December 1995 as estimated in the claim. Thus, the claim overstates the period of loss.

451. Based on the actual production rate and loss period, the Panel calculates that SAT lost a total of 63,483,315 barrels of production instead of the 68,651,500 estimated in the claim.

452. SAT values its production at the estimated margin per barrel of US$8.98, a figure that it calculates using accounting records submitted with the claim. As noted above, however, this estimated profit margin was calculated using a theoretical price for the oil. The Panel directed its consultants to estimate SAT's per barrel profit margin using actual sales prices. Therefore, during the verification period, the secretariat and the Panel's consultants reviewed SAT records relating to actual sales revenues and expenses for SAT's operations. From these records, the consultants were able to estimate that SAT's actual profit rate was US$5.226297 per barrel net of royalty but before payment of any taxes due.

453. Iraq contends that SAT's claim for loss of profits includes royalties and taxes. Iraq argues that royalty does not accrue when there is no

production because the value of the unrealized royalty is part of the crude oil reserves. Iraq also alleges that taxes are based on actual and realized income and are due when calculated accordingly. Iraq points out that SAT has not produced anything to substantiate the statement that Saudi Arabia has indicated that it will subject any award received by SAT to taxes and royalties.

454. The Panel has found no basis either in international law or in the practice of courts of major legal systems in cases such as this for deducting taxes potentially due from awards to an injured party. Iraq has not provided any legal authority in support of its position in this matter. Further, SAT has produced some evidence that suggests that Saudi Arabia would view any award on this claim as taxable income to SAT. Therefore, the recommendation is made on a gross basis. However, the Panel agrees that royalty only accrues on oil actually produced from the concession. As a result, Saudi Arabia will recover royalty if and when the oil is ultimately produced. Thus, the Panel will exclude from its recommendation the amount of any applicable royalty.

455. Using the actual figures for lost production and the profit margin estimated using actual sales and expense data, the Panel calculates that SAT's lost profits amounted to US$331,782,680 and recommends that SAT be awarded lost profits in this amount. As noted above, this amount is net of royalty and makes no deductions for any taxes payable.

456. Even if, contrary to what the Panel finds above, SAT were not limited to past performance in calculating losses and were permitted to project its losses over the entire life of the concession, the Panel would, however, still find that SAT has presented insufficient evidence that the investment programme would have been implemented at the time on which their calculations rely.

457. In its claim documentation and during the verification programme, SAT makes an extensive presentation on the nature, scope and expected benefits of the proposed investment programme. The key evidence submitted by SAT includes the April 1990 document entitled "1991-1995 Strategic Plan" (the "Plan") and a broad range of testimony from senior officials in SAT and Texaco regarding SAT's intent to implement the investment programme.

458. The Plan contains a general description of the development activity that SAT wished to pursue, the timetable it hoped to follow and the estimated costs for implementation of the development plans. The Plan was submitted to the Texaco Board of Directors, and the minutes of the relevant Board meeting record that the Plan was "endorsed" by the Board, although no specific expenditures were approved. SAT relies heavily on the Plan as proof of its intention to implement the investment programme.

459. SAT also argues that its Plan is supported by the fact that after liberation of Kuwait, substantial development did take place. Indeed, by January 1998, production from the PNZ had increased to almost double the pre-invasion levels.

460. The Panel does not question SAT's assertions that it would have implemented the investment programme; that is not relevant to the Panel's review of the claim. The question that must be answered is when would SAT have implemented the Plan had the invasion not occurred. On that point, SAT's evidence is weak and contradictory.

461. First, there were significant financial impediments to the implementation of the Plan. Numerous documents - including the Plan itself - state that future development expenditure in the PNZ was contingent upon the resolution of these financial issues. The resolution of these issues as a condition precedent to further development expenditure is the constant theme of communications virtually from the time that Texaco assumed control of Getty Oil. In spite of this documentation, SAT argues that the investment programme would have gone ahead even if the financial issues had not been resolved. SAT's own evidence, however, is contradictory, as some of it indicates that implementation of the Plan without resolution of the financial issues would not have occurred.

462. Second, the operations records of SAT do not support SAT's contentions. Given the size of the proposed investment programme, SAT's operation records should have contained evidence of SAT's intent to spend significant sums on the development projects identified in the Plan. The records contain no such evidence. SAT was unable to produce contracts, purchase orders, correspondence with potential contractors or other material that would have demonstrated that SAT was moving forward with its development plans. SAT also maintains a system of formal requests for expenditure authorization. The Panel's consultants have reviewed these documents for the period from Texaco's acquisition through to the invasion. The authorizations contain requests for funds for a minimal amount of test drilling. The remainder of these requests concern ordinary maintenance and non-developmental spending.

463. Third, the fact that the Plan contained specific plans for development does not necessarily prove that SAT would have implemented these plans. The Panel's consultants examined earlier strategic plans for SAT. Most of these plans also had provisions for capital expenditure for development. In each case, however, the actual amount of development work carried out under the plan was negligible. The evidence indicates that SAT customarily included capital expenditure plans in its budgets so that, in the event that the financial issues were resolved, SAT would not have to wait until the following budget year to begin seeking authorization for capital expenditure.

464. Based on the evidence presented, the Panel is of the view that SAT's evidence is not sufficient to prove that the investment programme on which much of the business losses portion of the amended claim is based would have been implemented within the period claimed by SAT. Thus, any claim for losses that is based on the implementation of the investment programme is, at best, speculative. For this reason, the Panel finds that the investment programme does not meet the Governing Council's requirement that business losses be "ascertained with reasonable certainty".

465. Taking into account the discussions and the adjustments detailed above, the Panel finds that, using the figures for lost production and profit margin estimated using actual production sales and expense data, SAT's lost profits before tax are US$331,782,680 on the lost production of 63,483,315 barrels and recommends compensation in this amount. This recommendation is itemized in the following table:

Table 33. SAT's business loss claims - recommended compensation

Claim element	Claim amount (original claim) (US$)	Claim amount (amended claim) (US$)	Recommended Compensation (US$)
Business Losses			
-loss of profits	616,490,470	-	331,782,680
-business interruption	-	1,380,135,392	0
Total	616,490,470	1,380,135,392	331,782,680

3. Extraordinary expenses: payments to others

466. In its amended claim, SAT requests compensation in the amount of US$$67,645,901 for losses it incurred as extraordinary expenses. SAT alleges that due to the invasion and occupation of Kuwait it incurred extraordinary expenses consisting of evacuating its personnel, setting up temporary headquarters, and reducing its workforce. Following the liberation, SAT alleges that it incurred costs in well blowout control, oil clean up and clearing ordnance. SAT also alleges that it incurred costs in the re-electrification of Mina Saud.

Table 34. Extraordinary expenses claim amounts

	Claim item/adjustment	Claim amount (amended claim) (US$)
(a)	Evacuation/relocation of personnel	1,163,017
(b)	Relocation of administrative facilities	676,952
(c)	Employee terminations and retirements	907,886
(d)	Maintaining inactive core work force	51,481,948
(e)	Personal effects losses and employee dislocation	11,117,980
(f)	Well blowout control, oil cleanup and ordnance removal	1,300,714
(g)	Re-electrification of Mina Saud	997,404
	Total	67,645,901

467. Iraq disputes this claim element for several reasons. Iraq alleges that SAT was unjustified in its decision to maintain a high number of permanent employees on inactive status and that SAT did not submit any supporting evidence with respect to payments for personal effects losses of its employees. Iraq also alleges that there is double counting for the amount claimed for inactive employee allowance. Iraq further alleges that cost and maintenance savings were not taken into account in SAT's claim for the re-electrification of Mina Saud because SAT had ceased using its own plant to generate electricity.

468. In support of this claim element, SAT's primary evidence consists of evidence of expenses such as invoices, authorization for expenditure ("AFE"), evidence of payments such as SAT's bank account statements and bank transfer confirmations from Riyadh Bank and details on post liberation repairs. SAT also produces affidavits and other internal documents such as a list of its employees, categories of SAT's employees, its employee policies, a list of employees affected by mandatory and early retirement, retirement benefits calculation worksheets, tables of payments to employees and excerpts of Kuwaiti labour legislation. In further support of its claim, SAT provided its consultants' report on extraordinary expenses. SAT's consultants' report on extraordinary expenses is based on payroll salary details, SAT cost summaries, wire transfer records, check copies, general ledger reports, and interviews with SAT management personnel.

469. Based on the evidence submitted by SAT and developed by the secretariat and the Panel's consultants during their review and verification of the claim, the Panel finds that SAT's extraordinary

expenses were incurred as alleged by SAT and these expenses were the direct result of the invasion and occupation.

(a) Costs of evacuating and relocating SAT personnel

470. SAT requests compensation in the amount of US$1,163,017 for the costs of evacuating and relocating SAT personnel. At the time of the invasion, SAT alleges that it incurred the costs of evacuating its employees from the PNZ and returning those personnel who were not actively employed to their point of origin. After the occupation, SAT alleges that it incurred further expenses to support its employees who were returning to Kuwait to assist in the re-entry and restart efforts. These expenses included travel related expenses, furniture for the employees' apartments and housing rental in Kuwait City.

471. Based on the evidence submitted, the Panel's consultants concluded that the costs incurred by SAT to evacuate and relocate its personnel were reasonable. The Panel's consultants were of the opinion, however, that one of the invoices was not directly related to evacuation costs, but instead related to management visits to SAT's headquarters in the ordinary course of SAT's business. Accordingly, the cost related to this invoice in the amount of US$31,175.47 was excluded. The Panel's consultants also included two other invoices, in the total amount of US$22,869.07, which in their opinion, were directly related to evacuation costs. Based on evidence of possible double counting, the Panel excluded all claimed expenditure for furniture for rental apartments in the amount of US$312,993.90 with the exception of carpets in the amount of US$55,342.47.

472. After adjusting for the above costs and expenditure, the Panel finds that SAT's costs of evacuating and relocating its personnel should be reduced to US$897,059.

(b) Costs of relocating SAT's administrative facilities

473. SAT requests compensation in the amount of US$676,952 for the costs of relocating SAT's administrative facilities. During Iraq's unlawful invasion and occupation of Kuwait, SAT alleges that it incurred costs in re-establishing its administrative offices in Dhahran and then in Riyadh, Saudi Arabia. After 2 March 1991, SAT relocated its offices to Kuwait city pending the restoration of its Mina Saud facility. SAT's costs include rental of office space in Riyadh and Kuwait City, meetings related to SAT's return to the PNZ and costs of business travel associated with maintaining SAT as a going concern during the occupation.

474. Based on the evidence, the Panel concluded that SAT's claim for costs of relocating its administrative facilities is reasonable. However, a number of payments for air flights amounting to US$31,807.47 were not

related to relocation costs resulting from the invasion. Accordingly, the Panel excludes these costs. The Panel also concludes, that the costs SAT claims it incurred for the meetings related to SAT's return to the PNZ in the amount of US$148,444.06, do not constitute an extraordinary expense. The meetings were in fact scheduled meetings of SAT's executive committee or joint committee, usually held in the course of SAT's ordinary business. The meetings would have occurred irrespective of the invasion and occupation and often would be located overseas. The Panel therefore concludes that the actual cost of the meetings and related expenses are properly part of SAT's ordinary business expenditure and the Panel recommends no compensation for these costs.

475. After adjusting for the above costs and expenditure, the Panel finds that SAT's cost of relocating its administrative facilities should be reduced to US$496,701.

(c) Costs of terminating or retiring SAT employees

476. SAT requests compensation in the amount of US$907,886 for costs of terminating or retiring some of its employees while maintaining an inactive "core work force". These costs consist of monthly annuities relating to mandatory retirement in the amount of US$410,184, lump sum incentive payments to retire early under an extended "Early Separation Plan" in the amount of US$181,808 and lump sum final settlement payments to non-permanent employees terminated on 1 October 1990 in the amount of US$315,894.

477. Based on the evidence submitted, the Panel's consultants determined that SAT's claim for costs incurred in terminating or retiring SAT employees are accurately stated and are reasonable. However, the monthly annuities in the amount of US$410,184 paid to SAT's employees when it implemented a policy to lower the mandatory retirement age of its employees is not a direct result of the invasion. SAT had considered this policy change prior to the invasion and was authorized by its head office in New York to implement the policy change. Therefore, costs incurred by SAT resulting from this policy change did not constitute extraordinary expenses but ordinary business expenditure. Accordingly, the Panel recommends no compensation for these costs.

478. After adjusting for the above costs, the Panel finds that SAT's cost of terminating and retiring its employees is US$497,702 and recommends compensation in this amount.

(d) Costs of maintaining SAT's inactive work force

479. SAT requests compensation in the amount of US$51,481,948 for costs of maintaining its inactive work force. During the occupation, SAT retained

some of its employees and purchased equipment to prepare for eventual reconstruction efforts. These costs consist of full pay including benefits and allowances for inactive employees from August 1990 through June 1995. SAT alleges that it had to make a commercial decision to retain some of its staff on full pay rather than terminate them. Under the Kuwaiti Labor Laws (Oil Sector) and SAT's company policy, SAT would have had to pay substantial severance payments based on length of service and level of salary if it had terminated its staff. Further, SAT alleges that it retained its employees the majority of whom are Saudi nationals, to maintain good relations with Saudi Arabia and to maintain a trained and skilled workforce.

480. The Panel's consultants used the average severance award in SAT's consultants' report to obtain an estimate of the level of termination payments. Based on the evidence submitted, the Panel's consultants conclude that the estimated termination payments would have been far higher than full salary payments.

481. Based on the above conclusions, the Panel finds that SAT's costs of maintaining its inactive work force in the amount of US$51,481,948 are reasonable and recommends compensation in this amount.

(e) Compensation for personal effects losses and employee dislocation

482. SAT requests compensation in the amount of US$11,117,980 for costs it incurred in compensating its employees for personal effects losses and in paying dislocation allowance. SAT alleges that it made payments amounting to US$9,500,618 to employees for personal effects that were not covered by insurance. SAT also alleges that it paid dislocation allowances in the amount of US$1,617,362 to retained employees for disruption and costs experienced when they had to abandon their homes and belongings.

483. Based on the evidence submitted, the Panel concludes that these costs are accurately stated and reasonable. The Panel therefore recommends that SAT receive compensation for the total costs incurred to compensate for its employees' personal effects losses and dislocation in the amount of US$11,117,980.

(f) Costs of well blowout control, oil cleanup and ordnance removal

484. SAT requests compensation in the amount of US$1,300,714 for the costs of well blowout control, oil clean up and ordnance removal. SAT alleges that its reconstruction efforts following the liberation included establishing security measures to prevent further looting, locating and removing a vast quantity of mines and unexploded ordnance, controlling burning wells and capping flowing wells, cleaning oil spills, repairing damaged wellheads and providing support for employees who returned. The

well blowout control costs and oil cleanup costs include SAT's 50 per cent share of costs in the amount of US$716,463.12 that were originally incurred by KOC in extinguishing fires in JO areas, SAT's purchase of firefighting material in the amount of US$26,416.44 and indirect firefighting costs in the amount of US$250,000 that the WBC Claim Panel indicated were not recoverable by KOC as a sole claimant due to the legal sharing arrangement governing the JO. SAT further alleges that it incurred costs in arranging ordnance removal in the amount of US$307,834.

485. Based on the evidence submitted, the Panel concludes that these costs are correctly stated and reasonable. The Panel finds, therefore, that SAT's total costs of well blowout control, oil cleanup and ordnance removal are US$1,300,714 and recommend compensation in this amount.

(g) Costs of re-electrification of Mina Saud

486. SAT requests compensation in the amount of US$997,404 for the costs of re-electrification of Mina Saud. SAT alleges that it was compelled to connect to the Kuwait Ministry of Electricity and Water ("MEW") to provide electricity at Mina Saud for its reconstruction efforts and resumption of its business. SAT asserts that prior to the invasion, it was self sufficient in generating electricity through a generator. These costs consist of design and modification of existing hardware in the amount of US$766,757.12 and for connection to the MEW power system in the amount of US$230,647.04.

487. Based on the verification review, the Panel's consultants discovered that SAT had already claimed for costs it incurred to re-supply electricity to Mina Saud in its physical assets claim element. Accordingly, the Panel recommends no compensation for SAT's claim for the costs of re-electrification of Mina Saud.

488. In summary, the Panel finds that SAT incurred extraordinary expenses in the amount of US$65,792,104 and recommends compensation in this amount.

Table 35. Extraordinary expenses - recommended compensation

Claim item/adjustment	Claim amount (amended claim) (US$)	Panel's recommended compensation (US$)
(a) Evacuation/relocation of personnel	1,163,017	897,059
(b) Relocation of administrative facilities	676,952	496,701
(c) Employee terminations and retirements	907,886	497,702
(d) Maintaining inactive core work force	51,481,948	51,481,948
(e) Personal effects losses and employee dislocation	11,117,980	11,117,980
(f) Well blowout control, oil cleanup and ordnance removal	1,300,714	1,300,714
(g) Re-electrification of Mina Saud	997,404	0
Total	67,645,901	65,792,104

4. Summary of recommendation

489. The Panel recommends total compensation be awarded to SAT in the amount of US$505,587,451 as itemized in the following table:

Table 36. Saudi Arabian Texaco - recommended compensation

Claim element	Claimant claim amount (original claim) (US$)	Claimant claim amount (amended claim) (US$)	Panel's recommended compensation (US$)
Physical assets	200,564,400	72,171,021	108,012,667
Business losses	616,490,470	1,380,135,392	331,782,680
Extraordinary expenses	63,203,800	67,645,901	65,792,104
Total	880,258,670	1,519,952,314	505,587,451

VIII. OTHER ISSUES

A. Currency exchange rate

490. The Panel notes that elements of some of the claims are stated in Kuwaiti dinars rather than in United States dollars. Because the Commission issues its awards in United States dollars, the Panel is required to determine the appropriate rate of exchange to apply to losses expressed and assessed in currencies other than United States dollars.

491. The Panel notes that all prior Commission compensation awards have relied upon the United Nations Monthly Bulletin of Statistics to determine the commercial exchange rate of other currencies into United States dollars. The Panel has adopted that approach for this report and finds that the appropriate exchange rate to be applied to the claims advanced in the second instalment in Kuwaiti dinar is the rate prevailing on 1 August 1990, immediately prior to the invasion and occupation of Kuwait, as reported in the United Nations Monthly Bulletin of Statistics. (See, e.g., supra, at page 73, note 13.)

B. Interest

492. All claim figures in the body of this report are analysed net of any individual interest claims advanced by the claimants.

493. In accordance with Governing Council decision 16, "[i]nterest will be awarded from the date the loss occurred until the date of payment, at a rate sufficient to compensate successful claimants for the loss of use of the principal amount of the award." In decision 16, the Governing Council further specified that "[i]nterest will be paid after the principal amount of awards," while postponing a decision on the methods of calculation and payment of interest.

494. The task of the Panel, therefore, is to determine the date from which interest will run for successful claimants in the Second Instalment.

495. Where a precise date of loss is apparent or discernable, the Panel recommends that interest run from that precise date.

496. In some cases, a precise date of loss cannot be established. In those cases, the Panel has been guided by the Report and Recommendations Made By The Panel Of Commissioners Concerning The First Instalment of "E2" Claims [S/AC.26/1998/7].

497. Thus, where the claim is for a loss of profits and that loss was incurred regularly over a period of time, the Panel has selected the mid-

point of that loss period as the date of loss for the purpose of calculating interest on the award.

498. Further, where the claim is for a loss of tangible assets, the Panel has selected 2 August 1990 (the date of Iraq's unlawful invasion and occupation of Kuwait) as the date of the loss, because that coincides with the claimants' date of loss of control over the assets in question.

499. The Panel has recommended awards to both KOC and SAT in respect of claims for certain extraordinary expenses. In each case, these expense were incurred over a period that extended from the date of the invasion to a date well after the liberation of Kuwait. In each extraordinary expense claim, the Panel has recommended that awards be made with respect to several loss elements belonging to several loss types. While the Panel was able to estimate that the claimants' compensable extraordinary expense losses occurred between 2 August 1990 and a particular date, it was not able to establish precise loss dates for each component of the compensable extraordinary expenses. The Panel is guided by its decision in the WBC claim regarding reconstruction payments made over a period of time for which it found that "the 'date' the loss occurred coincides with the period during which the relevant payments were made". (See WBC report at 65.) Therefore, the Panel selects the mid-point of the period over which the extraordinary expenses for which compensation is recommended were incurred as the date from which interest is to run.

500. In accordance with these determinations, the following is a table showing the loss elements for each claimant for which the Panel recommends compensation and the date from which the Panel recommends that interest awards on each loss element should run.

Table 37. Kuwait Oil Company recommended dates of loss

Claim element	Date of loss
Oil fields	2 August 1990
Ahmadi Township	2 August 1990
North and South tank farms	2 August 1990
Marine facilities	2 August 1990
Ras Al Zoor - Gas facility	2 August 1990
Projects under construction/ consideration	2 August 1990
Well blowout control - Al Awda and other physical assets	15 August 1991
Post well capping - Al Tameer	17 February 1993
Phase III	2 April 1995

501. The loss element for "projects under construction/consideration" contained claims both for tangible assets assembled for the projects and for future losses KOC attributed to the delay of the projects. Because the Panel recommends no compensation for the claimed future losses, it applies 2 August 1990, the date of loss for tangible assets.

502. The date of loss recommended for the last three loss elements referred to above represents the mid-point of the period over which the compensable losses included in each loss element were incurred.

Table 38. Kuwait Petroleum Corporation recommended dates of loss

Claim item	Date of loss
Stock at KOC premises	2 August 1990
Stock at KNPC premises	2 August 1990
Sulphur contract	2 August 1990
Fixed assets	2 August 1990

503. The loss element for the sulphur contract was presented as a contractual claim rather than a tangible assets claim. At the date of the invasion, however, the claimant was on the verge of presenting the documents that would have entitled it to payment on the contract. Thus, the Panel finds that 2 August 1990 is the appropriate date of loss for this loss element.

Table 39. Saudi Arabian Texaco - recommended dates of loss

Claim element	Date of loss
Physical assets	2 August 1990
Business losses	30 November 1992
Extraordinary expenses	14 January 1993

504. The date of loss recommended for the last two loss elements referred to above represents the mid-point of the period over which the compensable losses included in each loss element were incurred.

C. Claim preparation costs

505. All claim figures in the body of this report are net of any individual claim preparation cost claims advanced by the claimants.

506. In a letter dated 6 May 1998, the Panel was notified by the Executive Secretary of the Commission that the Governing Council intends to resolve the issue of claim preparation costs at a future date. Accordingly, the Panel takes no action with respect to claims for such costs.

IX. RECOMMENDATIONS

507. A summary of the claim amounts and the Panel's recommended compensation for each claim appears in the following table:

Table 40. Summary of the claim amounts and the Panel's recommended compensation for each claim

Claim	Claim no.	Claim amount (US$)	Recommended compensation (US$)
Saudi Arabian Oil Company	4002627	4,845,552,637	0
Arabian Oil Company	4000987	5,836,307,964	0
Kuwait Oil Company	4004160	2,512,896,177	2,216,550,792
Kuwait Petroleum Corporation	4003198	124,396,824	114,953,737
Saudi Arabian Texaco Inc	4000604	1,519,952,314	505,587,451
Total		14,839,105,916	2,837,091,980

Geneva, 19 February 1999

(Signed) Mr. Allan Philip
Chairman

(Signed) Judge Bola Ajibola
Commissioner

(Signed) Mr. Antoine Antoun
Commissioner

Notes

1. "Report of the Secretary-General pursuant to paragraph 19 of Security Council resolution 687 (1991)" (S/22559), para. 20 and 25. The quoted sections were included in section II of the Secretary-General's report, which the Governing Council was instructed to take into account when implementing Security Council resolution 687 (1991). See paragraph 5 of Security Council resolution 692 (1991).

2. Article 38 (d) of the Rules provides as follows:

> "Unusually large or complex claims may receive detailed review, as appropriate. If so, the panel considering such a claim may, in its discretion, ask for additional written submissions and hold oral proceedings. In such a case, the individual, corporation, Government, international organization or other entity making the claim may present the case directly to the panel, and may be assisted by an attorney or other representative of choice. The panel will complete its review of the case and report in writing through the Executive Secretary its recommendations to the Governing Council within twelve months of the date the claim was submitted to the panel."

3. "Criteria For Additional Categories of Claims" (S/AC.26/1991/7/Rev.1) (hereinafter referred to as "decision 7")

4. "Compensation for Business Losses Resulting from Iraq's Unlawful Invasion and Occupation of Kuwait where the Trade Embargo and Related Measures were also a Cause" (S/AC.26/1992/15), para. 6 (hereinafter referred to as "decision 15"). Decision 15 emphasizes that for an alleged loss or damage to be compensable, "the causal link must be direct" (para. 3).

5. Decision 9 (S/AC.26/1992/9). Decision 9 discusses the three main general categories of loss types that prevail among the category "E" claims: losses in connection with contracts, losses relating to tangible assets and losses relating to income-producing properties.

6. Decision 15, para. 5.

7. "United Nations Compensation Commission Claim Form for Corporations and Other Entities (Form E): Instructions for Claimants", (hereinafter "Form E") para. 6. This requirement is repeated at article 35, para. 1 of the Rules.

8. Form E, para. 6.

9. Report and Recommendations made by the panel of Commissioners concerning the First Instalment of "E2" Claims" (S/AC.26/1998/7) (the First "E2" report). "E2" report, (S/AC.26/1998/7) para. 65.

10."E2" report, para. 65.

11. The historical events leading to the creation of the PNZ and the ownership of the oil and gas resources there are set forth in connection with the Arabian Oil Barter Claim discussed in paragraphs 57-58, supra.

12. "Report and Recommendations made by the panel of Commissioners appointed to review the Well Blowout Control Claim (The 'WBC' Claim)" (S/AC.26/1996/5 Annex).

13. The exchange rates used for 1 August 1990 for the Kuwaiti dinar is the "mid-point rate" for July 1990 at US$1=KD0.289 as reported in the United Nations Monthly Bulletin of Statistics, vol. XLIV, No. 12, December 1990 (ST/ESA/STAT/SER.1/220).

14.Due to rounding, there are small differences between the amounts in the summary tables and the sums of the amounts of the individual loss elements.